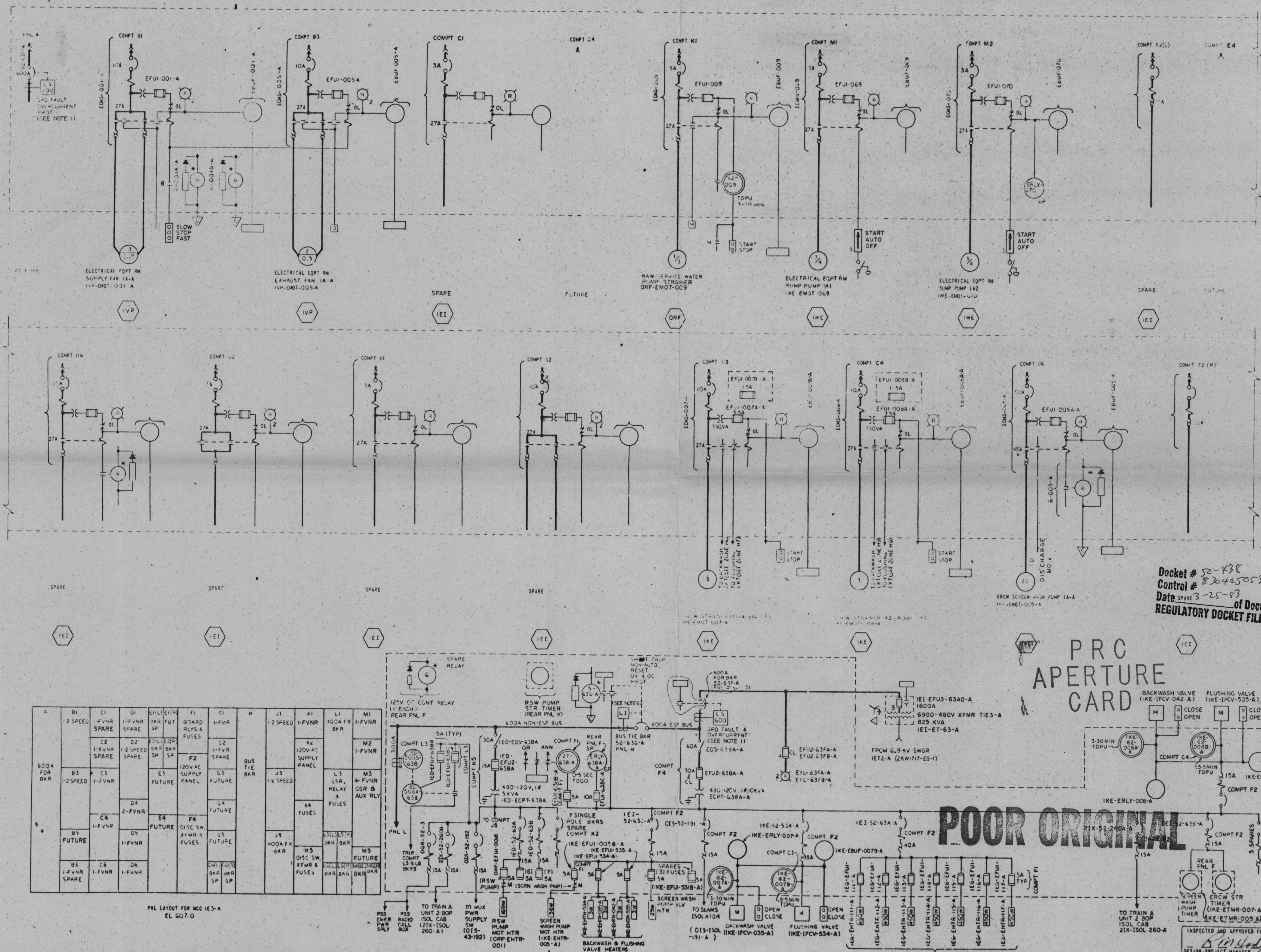


| A | B1 | C1 | D1 | E1(L) | E1(R) | F1 | G1 | H | J1 | K1 | L1 | M1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 600A FOR BKR | 1-2 SPEED | 1-FVNR SPARE | 1-FVNR SPARE | BKR SP | FUT | BOARD RLYS & FUSES | 1-FVR | BUS TIE BKR | 1-2 SPEED | 1-FVNR | 400A FR BKR | 1-FVNR |
| | | C2 1-FVNR SPARE | D2 1-2 SPEED SPARE | E2(L) BKR SP | E2(R) BKR SP | F2 120V AC SUPPLY PANEL | G2 1-FVR SPARE | | | K2 120V AC SUPPLY PANEL | | M2 1-FVNR |
| | B3 1-2 SPEED | C3 1-FVNR | | E3 FUTURE | | | G3 FUTURE | | J3 1-2 SPEED | | L3 GSR, RELAY & FUSES | M3 4-FVNR GSR & AUX RLY |
| | | C4 1-FVNR | D4 2-FVNR | E4 FUTURE | | F4 DISC SW, XFMR & FUSES | G4 FUTURE | | | K4 FUSES | | |
| | B5 FUTURE | | D5 1-FVNR | | | | G5 FUTURE | | J5 400A FR BKR | K5 DISC SW, XFMR & FUSES | L5(L) BKR / L5(R) BKR | M5 FUTURE |
| | B6 1-FVNR SPARE | C6 1-FVNR | D6 1-FVNR | | | | G6(L) BKR SP / G6(R) BKR SP | | | | L6(L) BKR / L6(R) BKR | M6(L) BKR / M6(R) BKR |

PNL LAYOUT FOR MCC 1E3-A
EL 607.0

| REFERENCE DRAWINGS AND DOCUMENTS | |
|---|---|
| DWG. NO. | TITLE |
| 2KW0720-RP-1 | PLANT AC AUX PWR SYS SINGLE LINE |
| 2KW1717-EG-1 | 6.9 KV SWGR 1ET2-A SINGLE LINE |
| [illegible] | [illegible] SYSTEMS CONTROL AND LOGIC DIAGRAM |
| 9KW0747-RP | 480V MCC COMPT TYPICAL SCHEMATICS |
| 9KW1740-EI-2 | 480V MCC CLASS IE DISTR SYS SCHEMATIC |
| 9KC1762-EI | COMPUTERIZED CIRCUIT SCHEDULE |

★★ – SYSTEM DESIGNATION

NOTES:

1. TVA FIELD TO SET MAIN FOR BKR AMPERE TAP AT 600A. SET LONG TIME PICKUP AT X1 AMPERE TAP AND MAX DELAY. SET SHORT TIME PICKUP AT X10 AMPERE TAP AND MIN DELAY. SET GROUND PICKUP AT X1 AMPERE TAP AND MIN DELAY.
2. 480V MCC PROVIDED ON CONTRACT NO 71KS-36242.
3. EACH DEVICE ASSOCIATED WITH THE MCC BUS AND THE SUPPLY CKT BKR IS PART OF THE 480V CLASS IE AC AUX PWR DISTR SYS WITH UNIT AND SYS DESIGNATION 1EI. THE DEVICE UNID IS FORMED BY PREFIXING THE DESIGNATIONS SHOWN ON THE DWG WITH 1EI, EXCEPT AS NOTED. ALL OTHER BKRS WITH THEIR ASSOCIATED DEVICES ARE PART OF THE SYS WHICH THEY SUPPLY. THE UNID IS FORMED BY PREFIXING THE DESIGNATIONS SHOWN ON THE DWG WITH THE UNIT AND SYS DESIGNATION SHOWN IN THE HEXAGON SYMBOL, EXCEPT AS NOTED. THE MCC COMPT NO UNID DESIGNATIONS ARE FORMED AS FOLLOWS USING THE COMPT NO (XX) AND THE BOARD NO (YY): 1EI-EMCC-YYXX.
4. ALL MOLDED CASE CIRCUIT BREAKERS ARE 3-POLE, 600V WITH AN INTERRUPTING RATING OF NOT LESS THAN 25,000 SYMMETRICAL RMS AMPS AT 480V. ALL CIRCUIT BREAKERS ARE 100A FRAME EXCEPT AS NOTED. FOR CIRCUIT BREAKERS SHOWN WITH SHUNT TRIP, THE SHUNT COIL TRIP VOLTAGE SHALL BE 55% OF THE RATED VOLTAGE OF THE COIL.
5. ALL MOTOR LOADS WITH STARTERS WILL UTILIZE CIRCUIT BKRS WITH ADJUSTABLE MAGNETIC TRIP SETTINGS. ALL OTHER BREAKERS HAVE THERMAL-MAGNETIC TRIP.
6. TVA FIELD TO SET BUS TIE BKR AMPERE TAP AT 600A. SET LONG TIME PICKUP AT X.9 AMPERE TAP AND INTMD DELAY. SET INSTANTANEOUS PICKUP AT X5 AMPERE TAP.
7. ALL [illegible] COMPARTMENT CONTROL TRANSFORMERS ARE [illegible] CONTROL FUSES ARE 1.5 AMP EXCEPT WHERE NOTED. [illegible] XFMRS ARE 150VA EXCEPT WHERE NOTED.
8. A 120V RED INDICATING LIGHT TO BE PROVIDED IN COMPARTMENTS SHOWN AND [illegible].
9. GROUND FAULT PROTECTION (GCO) FOR INDIVIDUAL LOADS SHOWN SHALL BE SET TO PICKUP AT APPROXIMATELY 10 AMPS PRIMARY CURRENT WITH NO INTENTIONAL TIME DELAY.
10. THIS MCC IS SUBJECT TO ALL REQUIREMENTS FOR CLASS IE ELECTRICAL EQUIPMENT.
11. THE MOTOR CONTROL CENTER CIRCUIT SCHEDULE CONTAINS THE TRIP SETTINGS FOR THE ADJUSTABLE MAGNETIC CIRCUIT BREAKERS.

SYMBOLS

- [C] – CONTROL FURNISHED BY MFHR
- [M] – ELEC OPERATED VALVE
- ★ – AUX RELAY & DESPIKING NETWORK IS USED FOR INTERFACE WITH SSCS. RELAY COIL IS 125V DC. RESISTOR IS 2K, 25W. DIODE IS RATED 75 MA, 300V PEAK INVERSE VOLTAGE.
- ANN – THIS FUNCTION TO BE MONITORED BY ONE OR MORE ANNUNCIATION OR ALARM SYSTEMS
- ▭ – INTERFACE WITH STATUS ENVIRONMENTAL ALARM MONITORING SYSTEM (SEAMS).
- ▽ – INTERFACE WITH REMOTE CONTROL SYSTEM
- ◯ – INDICATING LIGHT, R-RED, A-AMBER
- [D] – MOTOR OPERATED DAMPER

Docket # 50-438
Control # 8304050536
Date 3-25-83 of Document:
REGULATORY DOCKET FILE

PRC APERTURE CARD

POOR ORIGINAL

| REV NO. | ECN NO. / DESCRIPTION |
|---|---|
| 9 | 1365, SI — ECN 1365 - ADDED CONTACT FOR MAIN FOR BKR POSITION SEAMS INPUT |
| 8 | 927 — ECN 927 - ADDED HEAT TRACE PNLS |
| 7 | 967 — ECN 967 - ADD CONTROL CIRCUIT FUSES |
| 6 | 749, 471, SI — ECN 749 - MOVED SPARE 30A CKT BKR TO MCC 5XC. ECN SI - VARIOUS MINOR CHGS. ECN 471 - PROVIDE A 120V AC CKT BKR FEED TO PSS RADIO EQPT. |
| 5 | 729, SI, 572 — ECN 729 - CHGD TIE BKR TRIP DEVICE, ADDED TRIP SETTINGS TO BKR TRIP DEVICE. ECN SI - DELETED SYMBOL, VARIOUS MINOR CHANGES. ECN 572 - REVISED STRAINER BACKWASH & FLUSHING VALVE CONTROL CIRCUITS |
| 4 | 572, SI — ECN 572 - REVISED STRAINER BACKWASH & FLUSHING VLV. ECN SI - MINOR REV. |
| 3 | 442, 518, SI — ECN 442 - MOVED RSW PUMP & STRAINER CKT FROM IE TO NON-IE SIDE OF BUS. ECN 518 - CHANGED CONT FUSE RATING. SI - VARIOUS MINOR CHANGES. |
| 2 | 307, 157, 223, SI — ECN 307 - ADDED FUSES & BLOWN FUSE DETECTION TO XFMR. ECN 157 - ADDED PNL 6 FOR DISCH MOV & SPARE COMPTS. ECN 223 - ADDED BACKWASH & FLUSHING VALVES. SI - MINOR CHGS PER MFRR'S INFO |
| 1 | SI, 95, 104, 134 — ECN 104 - DELETED ERCW STR RM UNIT HTRS, ECN 95 - ADDED 6 RELAYS, ECN SI - ADDED UNID NOS & OTHER MINOR CHGS. ECN 134 - REV LOADS |

REV NO. | ECN NO. | DATE | DSGN | DRWN | CHKD | SUPV | ENGR | INSP | SUBM | RECM | APPR

DSGN S. BRIDGES
DRWN C.W.T.
CHKD W. HEFFERRY
SUPV J. BLANDFORD
INSP
ENGINEER

INTAKE PUMPING STATION

UNIT 1

SINGLE LINE
480 V MCC 1E3-A
1EI-EMCC-63-A

BELLEFONTE NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN
Q

INSPECTED AND APPROVED FOR ISSUE
DESIGN PROJECT MANAGER

SUBMITTED | RECOMMENDED | APPROVED

KNOXVILLE 12-20-74 | 88 | E | 9KW1732-EI-1 R

RECORD DRAWING AS CONSTRUCTED