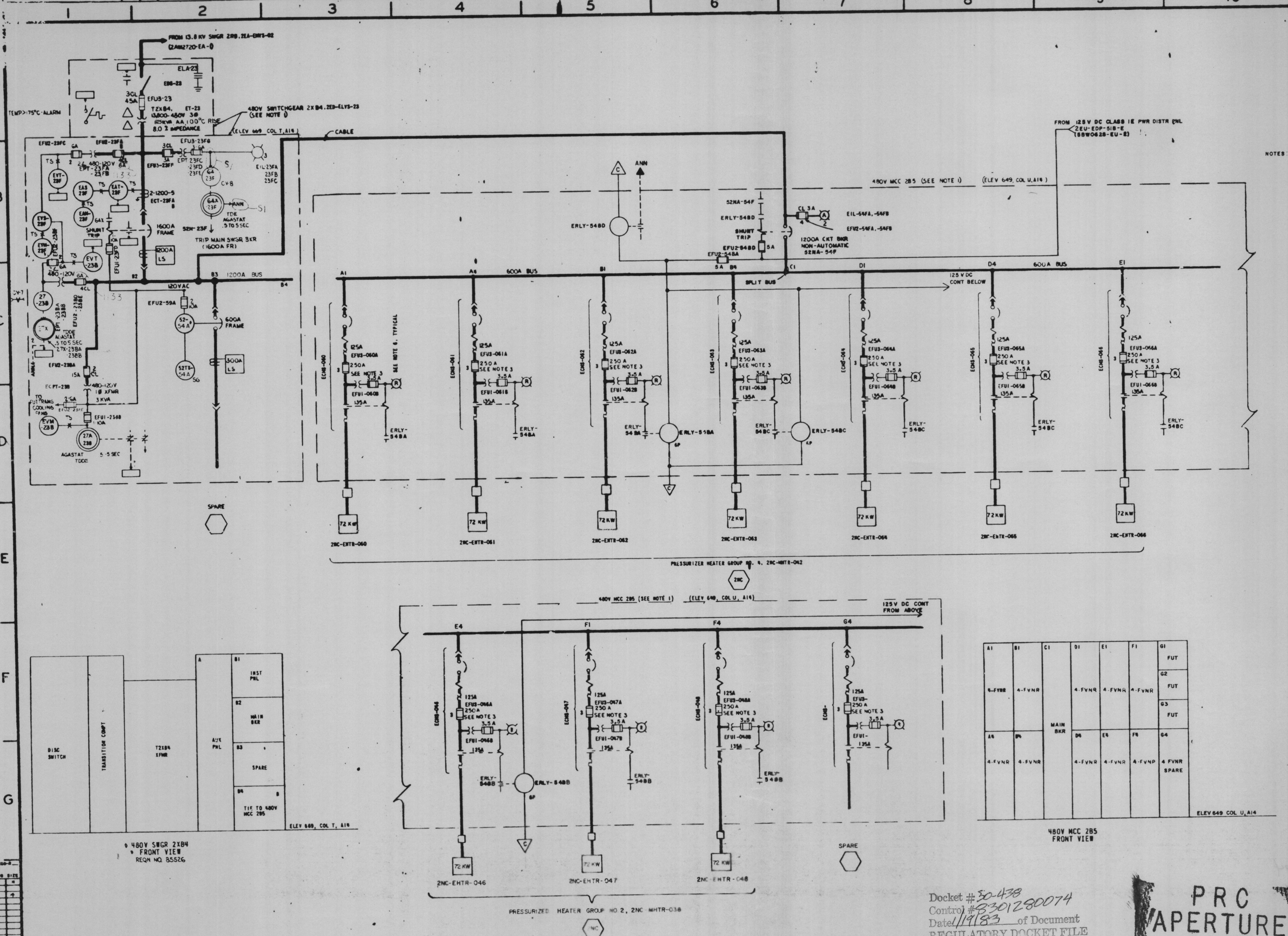


REFERENCE DRAWINGS

| DWG NO. | TITLE |
|---|---|
| 2GW0720-RP-1 | PLANT AC AUXILIARY POWER SYSTEM SINGLE-LINE |
| 5GW2740-ED | 480V SWGR 2XB4 SYS SCHEMATIC |
| 2GW0900-** | CONTROL & LOGIC DRAWINGS |

** SYSTEM DESIGNATION

NOTES:

1. 480V MCC PROVIDED ON CONTRACT NO. 76K5-86242
   480V SWGR PROVIDED ON CONTRACT NO. 76K3 85526
2. ALL MOLDED CASE CIRCUIT BREAKERS ARE 3-POLE, 600V, THERMAL-MAGNETIC, AND HAVE AN INTERRUPTING RATING OF NOT LESS THAN 25,000 RMS SYMMETRICAL AMPS AT 480V. ALL MCC BREAKERS ARE 400A FRAME WITH SHUNT TRIP EXCEPT AS NOTED. THE SHUNT TRIP COIL IS CAPABLE OF OPERATING AT 55% OF RATED VOLTAGE. 800A FRAME BKRS HAVE 30,000A RMS SYM INTERRUPTING RATING AT 480V. 1600A FRAME BKRS HAVE 50,000A RMS SYM INTERRUPTING RATING AT 480V.
3. FUSES IN THE POWER CIRCUITS ARE CHASE SHAWMUT AMP TRAP CLASS J (FUSES ARE REQUIRED TO PROVIDE REDUNDANT PROTECTION FOR PRIMARY CONTAINMENT PENETRATIONS, NOT FOR CIRCUIT BREAKER PROTECTION.)
4. ALL CONTACTORS ARE PROVIDED WITH 3 ELEC SEPARATE AUXILIARY CONTACTS.
5. ALL CONTROL TRANSFORMERS ARE 1Ø 480-120V WITH GROUNDED SECONDARY. FUSES SHALL BE SIZED TO PROTECT TRANSFORMERS.
6. A 120V RED IND LIGHT IS CONNECTED IN PARALLEL WITH EACH STARTER COIL.
7. EACH DEVICE ASSOCIATED WITH THE SWGR BUS, TRANSFORMER, AND THE NOR, TIE, OR SP CKT BKRS, IS PART OF THE 480V NORMAL AC AUX PWR DISTRIBUTION SYS WITH UNIT AND SYS DESIGNATION, ED. THE DEVICE UNID IS FORMED BY PREFIXING THE DESIGNATIONS SHOWN ON THE DWG WITH 2ED, 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 SWGR COMPARTMENT NO. UNID DESIGNATIONS ARE FORMED AS FOLLOWS USING THE COMPARTMENT NO (XX) AND THE BOARD NO (YY): 2ED-ELVS-YYXX
8. MCC 2B5 IS CLASS IE, SWGR 2XB4 IS NON-CLASS IE LOCATED IN A CATEGORY I STRUCTURE.
9. RELAYS SHALL BE THE TYPES SHOWN ON THIS DRAWING OR TVA APPROVED EQUIVALENT. (SEE NOTE 8)

SYMBOLS:

- INTERFACE FOR REMOTE CONTROL
- SOLID STATE TRIP DEVICE WITH SENSOR RATING: G - GROUND (FAULT CURRENT); L - LONG TIME DELAY (OVERLOAD); S - SHORT TIME DELAY (SELECTIVE TRIP); I - INSTANTANEOUS (FAULT CURRENT)
- PRIMARY CONTAINMENT PENETRATION
- INDICATING LIGHT, R = RED, A = AMBER
- INTERFACE FOR STATUS, ENVIRONMENTAL, AND ALARM MONITORING SYS (SEAMS)
- XXX - UNIT AND SYSTEM DESIGNATION (SEE NOTE 7)
- ANN. - THIS FUNCTION IS TO BE MONITORED BY ONE OR MORE ANNUNCIATION OR ALARM SYSTEMS.

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| REV NO. | ECN NO. | DATE | Description |
|---|---|---|---|
| 6 | 1133, S1 | 2-3-81 | REPLACED 3AMP FUSES WITH 6 AMP FUSES. MINOR CHANGES |
| 5 | S1,345,239 | 11-20-78 | GEN REVISION PER ECN S1-VARIOUS. MOD BUS UNDERVOLTAGE RELAY PER ECN 345. ADD HIGH VOLTAGE LIMITING FUSES PER ECN 239 |
| 4 | S1,156 | 4-22-76 | GEN REV PER ECN S1-VARIOUS. REDESIGN THE POWER AND CONTROL CIRCUITS OF PRESSURIZER HTR PER ECN 156. |
| 3 | 44, S-1 | 7-1-75 | INCORPORATED SEAMS PER ECN 44-VARIOUS. INCORPORATED UNID SYS, GEN REV PER ECN S-1-VARIOUS. |
| 2 | S1 | 1-8-75 | REMOVED GROUND FAULT LIMITING NETWORK & REVISED GROUND FAULT PROTECTION SYSTEM. |
| 1 | 21 | 12-6-74 | REVISED DWG LAYOUT, REMOVED HOLD ON MCC. |

DSGN H.F. JOHNSEY
DRWN R.E. MILLSAPS
CHKD H.F. JOHNSEY / W.L. ALDREDGE
SUPV W.L. ALDREDGE
ENGINEER [illegible]

AUXILIARY BUILDING
UNIT 2

# SINGLE LINE
# 480V PRESSURIZER HTR BDS - 2XB4 & 2B5
# 2ED-ELVS-23 & 2ED-EMCC-54

BELLEFONTE NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN

N

SUBMITTED [signature] RECOMMENDED [signature] APPROVED [signature]

KNOXVILLE 9-16-74 | 88 | E | 5AW2731-ED-1 | R6

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Date 1/19/83 of Document
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PRC APERTURE CARD