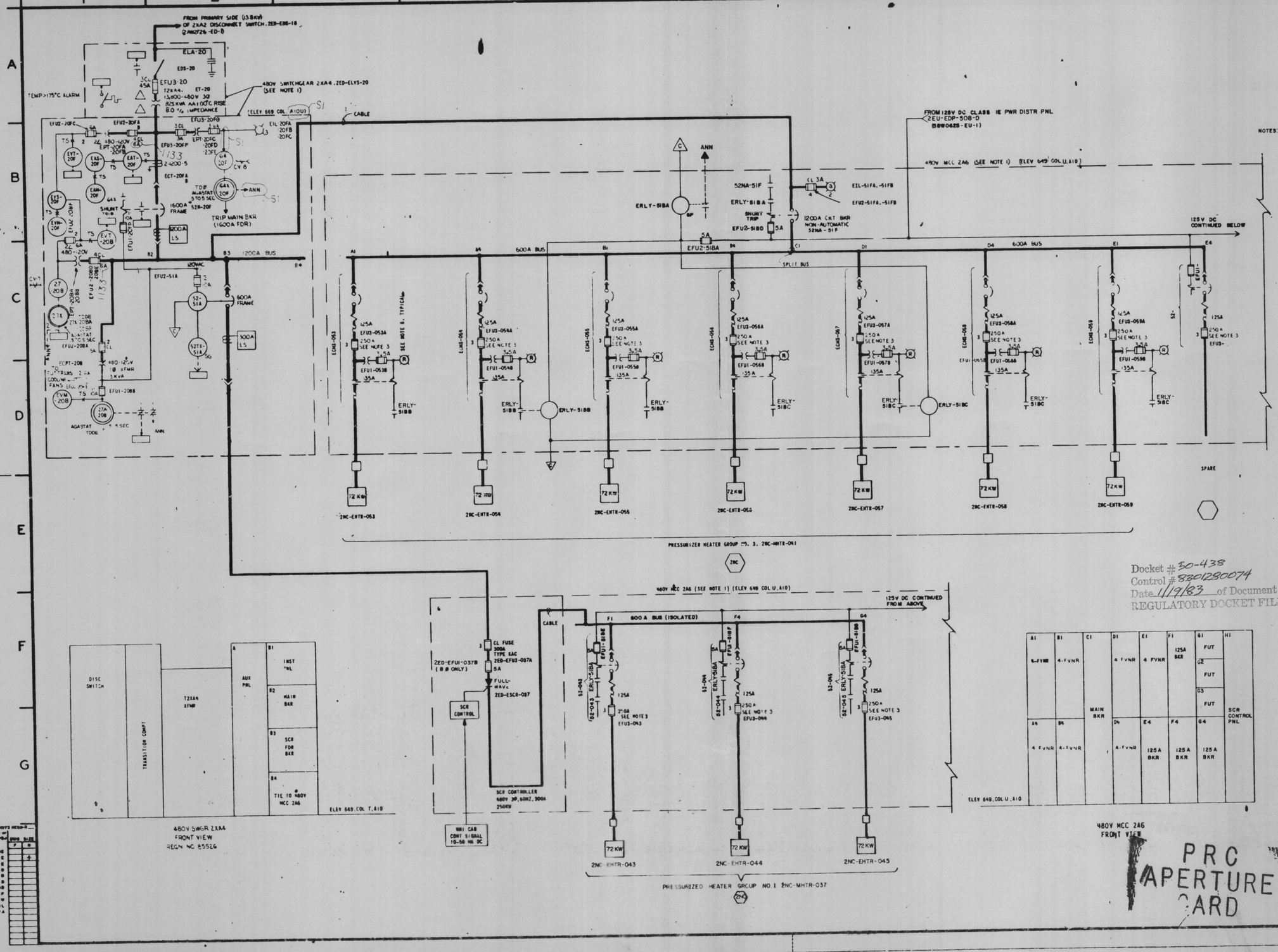

REFERENCE DRAWINGS	
DWG NO	TITLE
2GW0F20-RP-1	PLANT AC AUXILIARY POWER SYSTEM SINGLE LINE
5GW2740-ED	480V SWGR 2XA4 SYSTEM SCHEMATIC
2GW0900-**	CONTROL & LOGIC DRAWINGS

NOTES:

1. * SYSTEM DESIGNATION
   480 V MCC PROVIDED 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, 1600 A FRAME WITH SHUNT TRIP EXCEPT AS NOTED. THE SHUNT TRIP COIL IS CAPABLE OF OPERATING AT 55% OF RATED VOLTAGE. 1200A 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 PWR CKT ARE CHASE SHAWMUT AMP-TRAP CLASS J (EXCEPT AS NOTED) 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 UP 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, CKT BKR, 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 2A6 IS CLASS IE, SWGR 2XA4 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 SHOWN
  - L - LONG TIME DELAY (OVERLOAD)
  - S - SHORT TIME DELAY (SELECTIVE TRIP)
  - I - INSTANTANEOUS (FAULT CURRENT)
  - G - GROUND (FAULT CURRENT)
- PRIMARY CONTAINMENT PENETRATION
- INDICATING LIGHT, R = RED, A = AMBER
- INTERFACE FOR STATUS, ENVIRONMENTAL, AND ALARM MONITORING SYSTEM (SEAMS)
- UNIT AND SYSTEM DESIGNATION (SEE NOTE 7)
- ANN. - THIS FUNCTION TO BE MONITORED BY ONE OR MORE, ANNUNCIATION OR ALARM SYSTEMS

Docket # 50-438
Control # 8301280074
Date 1/19/83 of Document
REGULATORY DOCKET FILE

8301280087

REV NO.	ECN NO	DATE	DRAWN	DESIGNED	CHECKED	SUPV	ENGR	MGR	MAINT	OPERS	QC	APPR
6	1133, S1	2-3-81										
REPLACED 3 AMP FUSES WITH 6 AMP FUSES. MINOR CHANGES												
5	S1, 345, 239											
GEN REVISION PER ECN S1-VARIOUS. MOD BUS UNDERVOLTAGE RELAY PER ECN 345. ADD HIGH VOLTAGE LIMITING FUSES PER ECN 239.												
4	S1,	4-22-76										
GEN REV PER ECN S1-VARIOUS. REDESIGN THE POWER AND CONTROL CIRCUITS OF THE PRESSURIZER HTR PER ECN 164.												
3	84, S-1	7-1-75										
INCORPORATED SEAMS PER ECN 46-VARIOUS. INCORPORATED UNID SYS. GER 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, AND ADDED SCR CONTROLLER.												

DESIGN H.F. JOHNSEY
DRAWN R.E. WILLIAMS
CHKD
SUPV
MGR
ENGINEER

AUXILIARY BUILDING
UNIT 2

SINGLE LINE
480V PRESSURIZER HTR BDS-2XA4 & 2A6
2ED-ELVS-20 & 2ED-EMCC-51

BELLEFONTE NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN

N

SUBMITTED | RECOMMENDED | APPROVED

KNOXVILLE 9-16-74 | 88 E 5AW2730-ED-1 R6

PRC APERTURE CARD