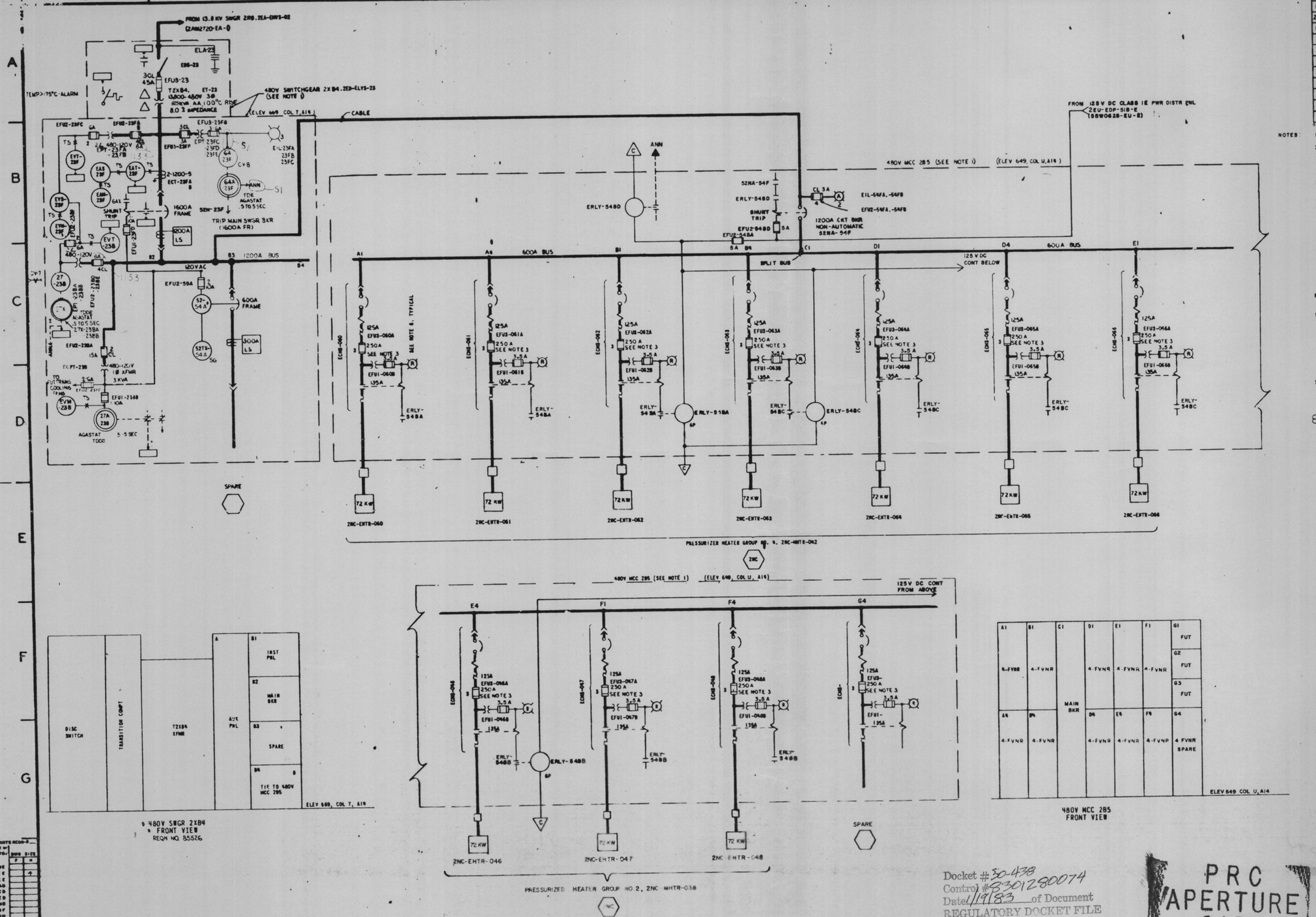

REFERENCE DRAWINGS	
DWG NO.	TITLE
2GWOF20-RP-1	PLANT AC AUXILIARY POWER SYSTEM SINGLE-LINE
0GW2740-ED	480V SWGR 2XB4 SYS SCHEMATIC
2GW0900-**	CONTROL & LOGIC DRAWINGS

** SYSTEM DESIGNATION

NOTES:

1. 480V MCC PROVIDED ON CONTRACT NO. 76K5-86242 480V SWGR PROVIDED ON CONTRACT NO. 76A3 85526
2. ALL MOLDED CASE CIRCUIT BREAKERS ARE 3-POLE, 600V, THERMAL-MAGNETIC, AND HAVE AN INTERRUPTING RATING OF MOT 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 SIZES HAVE 30,000A RMS SYM INTERRUPTING RATING AT 480V. 1600A FRAME SIZES 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 PROVICE REDUNDANT PROTECTION FOR PRIMARY CONTAINMENT PENETRATIONS, NOT FOR CIRCUIT BREAKER PROTECTION.)
4. ALL CONTACTORS ARE PROVIDED WITH 2 ELEC SEPARATE AUXILIARY CONTACTS.
5. ALL CONTROL TRANSFORMERS ARE 10 480-120V 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 NORM 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 (NN) DESIGNATIONS ARE FORMED AS FOLLOWS USING THE COMPARTMENT NO (XX) AND THE BOARD NO (YY): 2ED-ELVS-YYXX
8. MCC 2B5 IS CLASS 1E, SWGR 2XB4 IS NON-CLASS 1E 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 (ESI LSIG)
  - 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)

AMB. - THIS FUNCTION IS TO BE MONITORED BY ONE OR MORE ANNUNCIATION OR ALARM SYSTEMS.

MF
RO
RI
R2
R3
R4
R5
R5
R6

8301280090

6	1133,31	2-3-81	LWP	RJ	TRD	AM	WEX		WCC	LLS	LWP		
REPLACED 3AMP FUSES WITH 6 AMP FUSES. MINOR CHANGES													
5	SI,345,239	11-4-78	WT	RKF	TRS	JWB	JAB	-	AAG	LLS	LWP		
GEN REVISION PER ECN SI-VARIOUS. MOD BUS UNDERVOLTAGE RELAY PER ECN 345. ADD HIGH VOLTAGE LIMITING FUSES PER ECN 239													
4	SI,198	4-22-76	WR	SWJ	WR	WT	-	RTC	LLS	LWP			
GEN REV PER ECN SI-VARIOUS. REDESIGN THE POWER AND CONTROL CIRCUITS OF PRESSURIZER HTR PER ECN 198.													
3	98, S-1	7-1-75	RDB	WR	LWP	WLC	RTC	-	RTC	LLS	LWP		
INCORPORATED SEAMS PER ECN 98-VARIOUS. INCORPORATED UNIB SYS. GEN REV PER ECN S-1-VARIOUS.													
2	SI	1-8-75	DW	RDB	ETM	MAA	RTC	-	RTC	LLS	LWP		
REMOVED GROUND FAULT LIMITING NETWORK & REVISED GROUND FAULT PROTECTION SYSTEM.													
1	21	12-6-74	CBI	AM	DWL	WA	RTC	-	RTC	LLS	LWP		
REVISED DWG LAYOUT, REMOVED HOLD ON MCC.													
REV NO.	ECN NO.	DATE	DRAWN	TRACED	CHKD	APPD	ETMM	PROJ	DWG	MECH	APPD		

DRAWN - H.F. JOHNSEY
APPD - R.E. MILLSAPS
CHKD - G.E. JOHNSEY - (W.L. ALDERSON)
SUPV - W.L. ALDERSON

CHIEF -
ENGINEER - Myles J. Lenzinger

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	RECOMMENDED	APPROVED
Myles J. Lenzinger	J. P. Longino	R. M. Hodges

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

RECORD DRAWING AS CONSTRUCTED

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

PRC APERTURE CARD

PRINTS REQD - 3

DWG	SIZE F	SIZE H
DE		
EE		4
CE		
AD		
CS		
ED		
MD		
DF		
SW		
DL		
PA		