



REFERENCE DRAWINGS

DWG NO.	TITLE
ZC-0720-RP-1	PLANT AC AUXILIARY POWER SYSTEM SINGLE LINE
55W740-ED	480V SWGR IXA4 SYSTEM SCHEMATIC
ZC-0900-44	CONTROL & LOGIC DRAWINGS

- ** SYSTEM SCHEMATIC NOTES:
- 480V MCC PROVIDED ON CONT NO. 70K5-98242-480V SWGR PROVIDED ON CONT NO. 70K5-05054-480V. ALL HOLDERS CASE CIRCUIT BREAKERS ARE 3-PHASE, 500V, THERMAL MAGNETIC, AND HAVE AN INTERRUPTING RATING OF NOT LESS THAN 25,000 RMS SYM METRICAL AMPS AT 480V. ALL MCC BREAKERS ARE 4000 FRAME WITH SHORT TRIP EXCEPT AS NOTED. THE SHORT TRIP COIL IS CAPABLE OF OPERATING AT 85% OF RATED VOLTAGE. 600A FRAME BREAKERS HAVE 50,000 RMS SYM INTERRUPTING RATING AT 480V. 600A BREAKERS HAVE 50,000 RMS SYM INTERRUPTING RATING AT 480V.
 - FUSES IN THE POWER CIRCUITS ARE CHARGE DISMOUNT AMP TRIP CLASS J (EXCEPT AS NOTED). FUSES ARE REQUIRED TO PROVIDE REDUNDANT PROTECTION FOR PRIMARY COMPONENT PENETRATIONS, NOT FOR CIRCUIT BREAKER PROTECTION.
 - ALL CONTACTORS ARE PROVIDED WITH 3 ELEC SEPARATE AUXILIARY CONTACTS.
 - ALL CONTROL TRANSFORMERS ARE 10 480V-120V WITH GROUNDING SECONDARY. FUSES SHALL BE SIZED TO PROTECT TRANSFORMERS.
 - A 120V RED LED LIGHT IS CONNECTED IN PARALLEL WITH EACH STARTER COIL.
 - EACH DEVICE ASSOCIATED WITH THE SWGR BUS, TRANSFORMER, AND THE MCC TIE. CKT BKRS, IS PART OF THE 480V NORMAL AC AUX PWR DISTRIBUTION SYS WITH UNIT AND SYS DESIGNATION, E.G. THE DEVICE UNIT IS FORMED BY PREFIXING THE DESIGNATION SHOWN ON THE DWG WITH HED, EXCEPT AS NOTED. PREFIXING THE DESIGNATION WITH THEIR ASSOCIATED DEVICES ARE PART OF THE SYS WHICH THEY SUPPLY THE UNIT IS FORMED BY PREFIXING THE DESIGNATIONS SHOWN ON THE DWG WITH THE UNIT AND SYS DESIGNATION. PREFIXING THE DESIGNATIONS WITH THE HEXAGON SYMBOL, EXCEPT AS NOTED, THE SWGR COMPARTMENT NO. UNIT AND DESIGNATIONS ARE FORMED AS FOLLOWS USING THE COMPARTMENT NO. (XD) AND THE ROOM NO. (Y): HED-ELVS-YYXX.
 - MCC IAB IS CLASS 1B. SWGR IXA4 IS NON-CLASS 1B LOCATED IN A CATEGORY 1 STRUCTURE.
 - RELAYS SHALL BE THE TYPES SHOWN ON THIS DRAWING OR TVA APPROVED EQUIVALENT. (SEE NOTE 8)

SYMBOLS:

- Interface for remote control
- This function to be monitored by one or more annunciators or alarm systems
- Solid state trip device with sensor rating
- Long time delay (overload)
- Short time delay (selective trip)
- Instananeous (fault current)
- Ground fault circuit interrupter
- Primary containment penetration
- Indicating light, R=RED, A=AMBER
- Interface for status, environmental, and alarm monitoring system (SEAM)
- Unit and system designation (SEE NOTE 7)

8301280096

8	1133.SI	2-3-91	100	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
	REPLACED 3 AMP FUSES WITH 6 AMP FUSES. MINOR CHANGES.													
5	345.239													
	GEN REVISION PER ECN SI-VARIOUS. MOD BUS UNDERVOLTAGE RELAY PER ECN 345. ADD HIGH VOLTAGE LIMITING FUSES PER ECN 239.													

THE POWER AND CONTROL CIRCUITS OF PRESSURIZED HTR PER ECN 180

3	4L-3-1	7-7-75	480V	480V	480V	480V	480V	480V	480V	480V	480V	480V	480V	480V
	INCORPORATED SEAMS PER ECN 40-VARIOUS. INCORPORATED 8100 515. GEN REV PER ECN 3-1-VARIOUS.													
2	51	1-8-75	120V	120V	120V	120V	120V	120V	120V	120V	120V	120V	120V	120V
	REMOVED GROUND FAULT LIMITING NETWORK & REVISED GROUND FAULT PROTECTION SYSTEM.													
1	21	12-6-76	480V	480V	480V	480V	480V	480V	480V	480V	480V	480V	480V	480V
	REVISED DWG LAYOUT, REMOVED HOLD ON MCC, AND ADDED SCR CONTROLLER.													

REV	BY	DATE	DESCRIPTION
1	H.F. JOHNSON	12-6-76	REVISED DWG LAYOUT, REMOVED HOLD ON MCC, AND ADDED SCR CONTROLLER.
2	H.F. JOHNSON	1-8-75	REMOVED GROUND FAULT LIMITING NETWORK & REVISED GROUND FAULT PROTECTION SYSTEM.
3	H.F. JOHNSON	7-7-75	INCORPORATED SEAMS PER ECN 40-VARIOUS. INCORPORATED 8100 515. GEN REV PER ECN 3-1-VARIOUS.
4	H.F. JOHNSON	2-3-91	REPLACED 3 AMP FUSES WITH 6 AMP FUSES. MINOR CHANGES.

AUXILIARY BUILDING UNIT 1

SINGLE LINE
480V PRESSURIZER HTR BDS-IXA4 & IAG
IED-ELVS-20 & IED-EMCC-51

BELLEFONTE NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN

CONTROL # 8301280074
DATE 1/19/83 OF DOCUMENT REGULATORY DOCKET FILE

APPROVED	APPROVED	APPROVED
<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>

KNOXVILLE 9-16-79 88 E 5AW1730-ED-1

REV	BY	DATE	DESCRIPTION
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PRC APERTURE ARD