2AW2720-EA-1 | 1 | 88

REFERENCE DRAWINGS	
DWG NO.	TITLE
2SAW2720-MP CA	PLANT A.C. AUX POWER SYS SINGLE LINE
2SAW2720-EA	SYSTEM EA CONTROL & LOGIC DIAGRAMS
2SAW2720-EA	SYSTEM SCHEMATIC
2SAW0789-PP	MISC CIRCUIT ARRANGEMENT TYPICAL SCHEMATICS

SWITCHGEAR MANUFACTURER	ITE EMPERIAL CORPORATION
CONTRACT NUMBER	7545-95593

NOTES:

1. ALL CIRCUIT BREAKERS ARE 1200 AMPS CONTINUOUS, 750 MVA INTERRUPTING, 13.8KV NOMINAL, 60,000 AMPS MOMENTARY, 58,300 AMPS CLOSE AND LATCH. THE SWITCHGEAR MAIN BUS IS RATED 1200 AMPS CONTINUOUS, 50,000 AMPS MOMENTARY, 13.8KV NOMINAL.
2. AUTOMATIC TRANSFER IS INITIATED AND SUPERVISED BY UNDERVOLTAGE RELAYS; AUTO TRANSFER IS FROM NORMAL TO PREFERRED ALTERNATE SUPPLY ONLY. RETURN TO NORMAL IS MANUAL.

   MANUAL TRANSFER IS INITIATED AT THE UNIT CONTROL PANEL 5X A CLOSE COMMAND TO THE SELECTED SUPPLY BREAKER. THE COMMAND WILL SIMULTANEOUSLY TRIP THE CLOSED BREAKER AND COMPLETE THE CLOSE CIRCUIT TO THE SELECTED BREAKER.

   PARALLELING OF THE NORMAL AND ALTERNATE SUPPLIES IS PREVENTED BY ELECTRICAL INTERLOCKS ON THE SWITCHGEAR.
3. EACH DEVICE ASSOCIATED WITH THE 3WGR BUS, AND THE NOR. OR ALT. CKT BKRS IS PART OF THE 13.8KV, MOP AC AUX PWR DISTRIBUTION SYS WITH UNIT AND SYS DESIGNATION, 2EA. THE DEVICE UNID IS FORMED BY PREFIXING THE DESIGNATIONS SHOWN ON THE DWG WITH 2EA, 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 VERSION SYMBOL, EXCEPT AS NOTED. THE SWGR PNL NO. UNID DESIGNATIONS ARE FORMED AS FOLLOWS USING THE PNL NO. [X] AND THE BOARD NO. 2EA-EMVS-YYXX.
4. REACTOR PROTECTION SYSTEM CONNECTIONS AND 62X RELAYS SUPPLYING RPS SIGNALS REQUIRE PHYSICAL AND ELECTRICAL SEPARATION PER IEEE279 AND SECTION 5.6 OF PROPOSED IEEE STD P-MM, NOV 15, 1973 REV.
5. THIS EQUIPMENT IS CLASS 1E LOCATED IN A CATEGORY I STRUCTURE.
6. RELAYS SHALL BE THE TYPES SHOWN ON THIS DWG.

PRC APERTURE CARD

SYMBOLS:

- ▽ – REMOTE METER CONNECTION
- ▭ – INTERFACE FOR STATUS, ENVIRONMENTAL, AND ALARM MONITORING SYS (SEAMS)
- □ – PRIMARY CONTAINMENT PENETRATION
- ANN. – THIS FUNCTION TO BE MONITORED BY ONE OR MORE ANNUNCIATION OR ALARM SYSTEMS.
- ⬡ XXX – UNIT AND SYSTEM DESIGNATION
- ▽ – INTERFACE FOR REMOTE CONTROL
- ▽ – INTERFACE FOR INTEGRATED CONTROL SYSTEM (ICS)
- ▽ – INTERFACE FOR REACTOR PROTECTION SYSTEM (RPS)

NO.	DESCRIPTION	DATE	PSGR	DSGN	CHKD	SUPV	ENGR	NSP	QA	SUB	RCVR	APPR
5	906.5K	12-6-74										
	CHANGED AGASTATS TO ITE-62L & AMA TO JIS. MINOR MINOR CHANGES											
4	775,976,SI	11-7-74										
	REMOVED SIK AND ADDED EARLY RELAYS, CHANGED HMA TO JIS. MINOR CHANGES											
3	379,347, 424,SI	5-8-74										
	PROVIDED SEPARATE 125 VDC CONT POWER FOR HCP NOT 3 OTHER SWGR BOARD FUNCTIONS, IMPLEMENTED ANTICIPATORY RELAY SCHEME, PROVIDED ADDITIONAL RCP MOTOR PROTECTION, & MINOR CHANGES											
2	107,138 SI-138	1-24-74	JCH	JCH								
	IMPLEMENTED 55 RELAYS PER ECN 107, VARIOUS REVISION PER POST SYS INPUTS PER ECN 138, MINOR REV PER SI VARIOUS CHANGED CR RATIOS PER ECN 134.											
1	104,134,SI-134	1-24-74	JCH	JCH	WMA	JSC						
	CHG DC CONT PWR-TRANS SW FROM AUTO TO NML PER ECN 54, INCORPORATED SEAMS PER ECN 44, INCORPORATED UNID SYS DESIGNATIONS PER ECN 5-1, CHANGED RCP FEEDS PER ECN 76, ADDED FEED TO XFMR T2A4 PER ECN 21.											

DSGN	G REED	INSP
DRWN	B SPENCER	
CHKD	J E SEALS	ENGINEER
SUPV	J E REED	

AUXILIARY BUILDING
UNIT 2

SINGLE LINE DIAGRAM
13800V SWITCHGEAR 2RA, 2EA-EMVS-01
AND 2RB, 2EA-EMVS-02

BELLEFONTE NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN

Q

SUBMITTED	RECOMMENDED	APPROVED

INSPECTED AND APPROVED FOR ISSUE
DESIGN PROJECT MANAGER

KNOXVILLE 2-1-74 | 88 | 2AW2720-EA-1 | R5

45W712-1

RECORD DRAWING AS CONSTRUCTED

Docket # 50-438
Control # 8304050531
Doc # 325-83
of Documents
REGULATORY DOCKET FILE