



REFERENCE DRAWINGS	
2AW2723-1	STATION B.C. AUX. PNL. SINGLE LINE
2AW2723-2	SYSTEM CONTROL & LOCK DIAGRAM
2AW2723-3	LEVEL GENERATOR SINGLE LINE DIAGRAM
2AW2723-4	SYSTEM CONTROL
2AW2723-5	SYSTEM CONTROL
2AW2723-6	SYSTEM CONTROL
2AW2723-7	SYSTEM CONTROL
2AW2723-8	SYSTEM CONTROL
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2AW2723-48	SYSTEM CONTROL
2AW2723-49	SYSTEM CONTROL
2AW2723-50	SYSTEM CONTROL

SWITCHGEAR MANUFACTURER: ITE IMPERIAL CORPORATION
 CONTRACT NUMBER: 7549-5453

- NOTES:
- ALL CIRCUIT BREAKERS ARE 200 AMPS CONTINUOUS, 500 MVA INTERRUPTING, 12.5KV NOMINAL, 30,000 AMPS, MOMENTARY, 27,000 AMPS CLOSE AND LATCH.
 - THE SWITCHGEAR MAIN BUS RATING IS 1200 AMPS CONTINUOUS, 30,000 AMPS MOMENTARY AT 12.5 KV NOMINAL.
 2. AUTOMATIC TRANSFER BETWEEN POWER SOURCES IS INITIATED BY BUS UNDERVOLTAGE (27V RELAYS) AND IS FROM NORMAL TO ALTERNATE, OR STANDBY OR FROM ALTERNATE TO STANDBY. RELAYS 27V PREVENTS AUTOMATIC TRANSFER TO A 2ND ALTERNATE SUPPLY AND RESIDUAL VOLTAGE LESS THAN 50% OF NOMINAL, RETURN TO NORMAL OR ALTERNATE IS MANUAL.
 - MANUAL TRANSFER BETWEEN NORMAL AND ALTERNATE SUPPLY AND STANDBY TO NORMAL OR ALTERNATE IS FAST (50 CYCLES) AND IS INITIATED BY A CLOSE COMMAND TO THE SELECTED BREAKER. THIS COMMAND WILL UNLATCH ONLY THE TRIP THE CLOSED BREAKER AND COMPLETE THE CLOSE CIRCUIT OF THE SELECTED BREAKER.
 - TRANSFER FROM THE STANDBY POWER SOURCE AND PARALLELING OF THE STANDBY WITH NORMAL, OR ALTERNATE SUPPLIES IS DONE AT THE DIESEL GENERATOR CONTROL PANEL USING SYNCHRONIZING SWITCHES. ELECTRICAL INTERLOCKS IN THE SWITCHGEAR PREVENT PARALLELING THE NORMAL AND ALTERNATE POWER SOURCES.
 - EACH DEVICE ASSOCIATED WITH THE SWGR BUS, AND THE NOR, ALT, EMER, OR THE ECT BUS, IS PART OF THE 690V CLASS 1E AC AUX PNL DISTRIBUTION SYSTEM UNIT AND SYS DESIGNATION. THE DEVICE UNIT IS FORMED BY PREFIXING THE DESIGNATION SHOWN ON THE IWD WITH 2E0, EXCEPT AS NOTED. ALL OTHER SIGS WITH THEIR ASSOCIATED DEVICES ARE PART OF THE SYS WHICH THEY CONTROL. THE UNIT IS FORMED BY PREFIXING THE DESIGNATION SHOWN ON THE IWD WITH THE UNIT AND SYS DESIGNATION IN THE HEXAGON SYMBOL, EXCEPT AS NOTED. THE SWGR PNL NO. UNIT DESIGNATIONS ARE FORMED AS FOLLOWS USING THE PNL NO. (1), AND THE TRIP DESIGNATION (2) OR (3): 2E0-EM5-0732-1.
 - THIS EQUIPMENT IS CLASS 1E.
 - RELAYS SHALL BE TYPES SHOWN ON THIS DRAWING.
 - A TRIP SIGNAL WILL BE INITIATED ONLY WHEN THE NOR OR ALT BKR IS CLOSED.
 - A TRIP SIGNAL TO THE DSL GEN IS GENERATED ONLY WHEN THE DSL GEN BUS IS OPEN.

- ANN - THIS FUNCTION TO BE MONITORED BY ONE OR MORE ANNUNCIATION OR ALARM SYSTEMS.
- HEXAGONS NORMALLY IN THE TRIPPED STATE WITH SPRINGS DISCHARGED AND CHARGING MOTORS SWITCHED OFF.
 - INTERFACE FOR STATUS, ENVIRONMENTAL AND ALARM MONITORING SYS (SEMS)
 - INTERFACE FOR REMOTE CONTROL
 - REMOTE METER CONNECTION
 - KEY INTERLOCK
 - UNIT AND SYSTEM DESIGNATION

REV	NO.	DATE	BY	CHKD	DESCRIPTION
1	1	11/12/78	J. J. POSTON		ISSUED FOR CONSTRUCTION
2	2	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
3	3	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
4	4	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
5	5	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
6	6	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
7	7	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
8	8	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
9	9	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
10	10	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
11	11	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
12	12	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
13	13	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
14	14	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
15	15	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
16	16	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
17	17	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
18	18	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
19	19	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
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22	22	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
23	23	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
24	24	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
25	25	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
26	26	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
27	27	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
28	28	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
29	29	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES
30	30	11/12/78	J. J. POSTON		REVISED 27V 272C-B RELAY, MADE MINOR CHANGES

PRC APERTURE CARD

AUXILIARY BUILDING UNIT 2

SINGLE LINE DIAGRAM

6900V SWITCHGEAR 2E1-B

2E2-EMNS-07-B

BELLEFONTE NUCLEAR PLANT
 TENNESSEE VALLEY AUTHORITY
 DIVISION OF ENGINEERING DESIGN

DESIGN PROJECT MANAGER: *R. M. ...*

INSPECTED AND APPROVED FOR ISSUE: *R. M. ...*

DATE: 11/27/78

45W718-2 FSAR

THIS DRAWING IS UNDER CONFIGURATION CONTROL

Sheet # 88-438
 Control # 88-438-36
 Date 11-25-78 of Document
 REGULATORY BOOKLET FILE