



SWITCHGEAR MANUFACTURER: ITE IMPERIAL CORPORATION
 CONTRACT NUMBER: 75-5-85503

- NOTES:
- ALL CIRCUIT BREAKERS ARE 1200 AMP CONTINUOUS, 750 MVA INTERRUPTING, 13.8KV NOMINAL, 40,000 AMP HOMOGENEOUS, 30,000 AMP'S CLOSE AND LATCH. THE SWITCHGEAR MAIN BUS IS RATED 1200 AMP CONTINUOUS, 40,000 AMP HOMOGENEOUS, 13.8KV NOMINAL.
 - 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 BY 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.
 - EACH DEVICE ASSOCIATED WITH THE DWS BUS, AND THE NORM OR ALT, CAT BAYS IS PART OF THE 13.8KV NORM OR ALT BUS DISTRIBUTION SYS WITH UNIT AND SYS DESIGNATION, IEA. THE DEVICE UNID IS FORMED BY PREFIXING THE DESIGNATIONS SHOWN ON THE DWS WITH IEA, EXCEPT AS NOTED. ALL OTHER BAYS WITH THEIR ASSOCIATED DEVICES ARE PART OF THE SYS WHICH THEY SUPPLY. IEA IS PREFIXED BY PREFIXING THE DESIGNATIONS SHOWN ON THE DWS WITH THE UNIT AND SYS DESIGNATION SHOWN IN THE HEADLINE SYMBOL. IEA IS PREFIXED TO THE UNIT AND SYS DESIGNATIONS AS FOLLOWS USING THE PREFIXES SHOWN IN THE HEADLINE SYMBOL.
 - REACTOR PROTECTION SYSTEM CONNECTIONS AND RELAYS SUPPLYING RPS SIGNALS REQUIRE PHYSICAL AND ELECTRICAL SEPARATION PER IEEE 3-2.9 AND SECTION 5.6 OF PROPOSED IEEE STD, PART 3, 1975.
 - THIS EQUIPMENT IS CLASSIFIED AS BEING IN A CATEGORY 1 STRUCTURE.
 - RELAYS SHALL BE THE TYPES SHOWN ON THIS DWS.

- SYMBOLS:
- XXX - UNIT AND SYSTEM DESIGNATION
 - △ - INTERFACE FOR REMOTE CONTROL
 - ▽ - INTERFACE FOR INTEGRATED CONTROL SYSTEMS (ICS)
 - ▽ - INTERFACE FOR REACTOR PROTECTION SYSTEM (RPS)
 - ▽ - 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.

NO.	REV.	DATE	REASON FOR CHANGE	BY	CHKD	APPD
1	1	11/27/75	ISSUED FOR CONSTRUCTION	...	...	...
2	1	12/15/75	CHANGED MODEL NO. OF RELAY IN RCP-028A	...	...	...
3	1	1/27/76	CHANGED AGASTAT TO ITC-62L AND HMA TO JIS	...	...	...
4	1	7/7/76	REMOVED BIX AND ADDED EARLY RELAY, CHANGED HMA TO JIS METER CHANNELS	...	...	...
5	1	9/29/76	ADDED EARLY RELAY, CHANGED HMA TO JIS METER CHANNELS	...	...	...
6	1	11/27/76	PROVIDED SEPARATE 125V DC CONT. PWR FOR RCP MOTORS OTHER SWGR BOARD FUNCTIONS, IMPLEMENTED ANTICIPATORY RELAY SCHEME, PROVIDED ADDITIONAL RCP MOTOR PROTECTION, 3 MINUTE DELAY	...	...	...
7	1	1/11/77	REMOVED EARLY RELAY, CHANGED HMA TO JIS METER CHANNELS	...	...	...
8	1	1/11/77	CHANGED 55 RELAYS PER ECU TO 110 RELAYS, DELETED 55 RELAYS PER ECU 134	...	...	...
9	1	1/11/77	CHANGED 55 RELAYS PER ECU TO 110 RELAYS, DELETED 55 RELAYS PER ECU 134	...	...	...
10	1	1/11/77	CHANGED 55 RELAYS PER ECU TO 110 RELAYS, DELETED 55 RELAYS PER ECU 134	...	...	...
11	1	1/11/77	CHANGED 55 RELAYS PER ECU TO 110 RELAYS, DELETED 55 RELAYS PER ECU 134	...	...	...
12	1	1/11/77	CHANGED 55 RELAYS PER ECU TO 110 RELAYS, DELETED 55 RELAYS PER ECU 134	...	...	...

AUXILIARY BUILDING UNIT 1

SINGLE LINE DIAGRAM
 13800V SWITCHGEAR - IRA, IEA-EMVS-01 AND IRB, IEA-EMVS-02

BELLEFONTE NUCLEAR PLANT
 TENNESSEE VALLEY AUTHORITY
 DIVISION OF ENGINEERING DESIGN

INSPECTED AND APPROVED FOR ISSUE: *[Signature]*
 DESIGN PROJECT MANAGER

SUBMITTED: *[Signature]* RECOMMENDED: *[Signature]* APPROVED: *[Signature]*

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