



REV. NO.	TITLE
1	STATION A.E. ADD. PNL 113, SINGLE LINE
2	SYSTEM CONTROL & LOGIC DIAGRAMS
3	6900V SWITCHGEAR SINGLE LINE DIAGRAM
4	SYSTEM CONTROL & LOGIC DIAGRAMS
5	6900V SWITCHGEAR SINGLE LINE DIAGRAM
6	SYSTEM CONTROL & LOGIC DIAGRAMS
7	6900V SWITCHGEAR SINGLE LINE DIAGRAM
8	SYSTEM CONTROL & LOGIC DIAGRAMS
9	6900V SWITCHGEAR SINGLE LINE DIAGRAM
10	SYSTEM CONTROL & LOGIC DIAGRAMS
11	6900V SWITCHGEAR SINGLE LINE DIAGRAM
12	SYSTEM CONTROL & LOGIC DIAGRAMS

SWITCHGEAR MANUFACTURER: ITE IMPERIAL CORPORATION  
 CONTRACT NUMBER: 7545-85583

NOTES:  
 1. ALL SWITCHGEAR BREAKERS ARE 1200 AMP CONTINUOUS, 500 MVA INTERLOCKING, 7.2 KV NOMINAL, 80000 AMP MOMENTARY, 17000 AMP CLOSE AND LATCH.  
 2. THE SWITCHGEAR MAIN BUS RATING IS 1200 AMP CONTINUOUS, 80,000 AMP MOMENTARY, AT 7.2 KV NOMINAL.  
 3. 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 DEAD ALTERNATE. SUPPLY AND RESIDUAL VOLTAGE RELAYS 27V PREVENT 22A AND 22E FROM CLOSING UNTIL BUS VOLTAGE IS LESS THAN 30% OF NOMINAL. RETURN TO NORMAL OR ALTERNATE IS MANUAL.  
 4. MANUAL TRANSFER BETWEEN NORMAL AND ALTERNATE SUPPLY AND STANDBY TO NORMAL OR ALTERNATE IS INITIATED BY A CLOSE COMMAND TO THE SELECTED BREAKER. THIS COMMAND WILL SIMULTANEOUSLY TRIP THE CLOSED BREAKER AND COMPLETE THE CLOSING OF THE SELECTED BREAKER.  
 5. 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.  
 6. EACH DEVICE ASSOCIATED WITH THE SWID BUS, AND THE NOR, ALT, EWER, OR THE CRT 8004, IS PART OF THE 690V CLASS IE AC UNIT PER DISTRIBUTION SYS-114 UNIT AND SYS DESIGNATION. THE DEVICE UNIT IS FORMED BY PREFIXING THE DESIGNATIONS WITH THE SYS WITH IE, EXCEPT AS NOTED. ALL OTHER PARTS WITH THEIR ASSOCIATED DEVICES ARE PART OF THE 690V CLASS IE UNIT FORMED BY PREFIXING THE DESIGNATIONS WITH C-14E AND WITH THE ALT AND SYS DESIGNATION WITH IE. THE DESIGNATION EXCEPT AS NOTED. THE SWID PNL NO. UNIT DESIGNATIONS ARE FORMED AS FOLLOWS USING THE PNL NO. (X) AND THE UNIT DESIGNATION (Y) OR (Z): X-Y-Z-SWID-000-0.

- 1. THIS EQUIPMENT IS CLASS IE.
  - 2. RELAYS SHALL BE TYPED SHOWN ON THIS DRAWING.
  - 3. A TRIP SIGNAL WILL BE INITIATED ONLY WHEN THE NOR OR ALT BAR IS CLOSED.
  - 4. A TRIP SIGNAL TO THE DSL GEN IS GENERATED ONLY WHEN THE DSL GEN BKR IS OPEN.
- SYMBOLS:  
 ANN - THIS FUNCTION TO BE MONITORED BY ONE OR MORE ANNUNCIATOR OR ALARM SYSTEMS.  
 DISCONNECT NORMALLY IN THE TRIPPED STATE WITH SPRINGS, DISCHARGED AND CHARGING MOTOR SWITCHED OFF.  
 INTERFERENCE FOR STATUS, ENVIRONMENTAL AND ALARM MONITORING SYS (SEAMS).  
 INTERFERENCE FOR REMOTE CONTROL.  
 REMOTE METER CONNECTION.  
 KEY INTERLOCK.  
 ANN AND SYS DESIGNATION.

REV. NO.	DATE	BY	CHKD	APPV	REVISION
1	12/11/83	...	...	...	...
2	12/11/83	...	...	...	...
3	12/11/83	...	...	...	...
4	12/11/83	...	...	...	...
5	12/11/83	...	...	...	...
6	12/11/83	...	...	...	...
7	12/11/83	...	...	...	...
8	12/11/83	...	...	...	...
9	12/11/83	...	...	...	...
10	12/11/83	...	...	...	...
11	12/11/83	...	...	...	...
12	12/11/83	...	...	...	...

UNIT 1  
 SINGLE LINE DIAGRAM  
 6900V SWITCHGEAR IETI-A  
 IEG-EMVS-06-A

BELLEFOUNTE NUCLEAR PLANT  
 TENNESSEE VALLEY AUTHORITY  
 DIVISION OF ENGINEERING DESIGN

FSAR FIG. B-31-6  
 INSPECTED AND APPROVED FOR ISSUE  
 RMH  
 DESIGN PROJECT MANAGER

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

KNOXVILLE 12-22-83 88 E 2AW1722-EG-1  
 45W717-11 FSAR

THIS DRAWING IS UNDER CONFIGURATION CONTROL