

GENERAL

NOTES:

- 1. PORTIONS OF THE SYSTEM SCHEMATIC ARE SHOWN OUT-OF-FUNCTION. THESE OUT-OF-FUNCTION PORTIONS ARE SHOWN FOR INFORMATION WITH REFERENCES PROVIDED TO THE DOCUMENT WHICH CONTROLS THE EQUIPMENT.
- 2. ALL UNIQUE IDENTIFICATION CODES SHOWN ARE PREFIXED WITH I TO DENOTE EQUIPMENT ASSOCIATED WITH GENERATING UNIT 1 IMMEDIATELY FOLLOWED BY SYSTEM DESIGNATION ED UNLESS OTHERWISE NOTED.
- 3. ALL ELECTRICAL EQUIPMENT IS SHOWN IN ITS DE-ENERGIZED STATE.
- 4. SEE THE CABLE PROGRAM OF SYSTEM ED FOR COMPLETE CABLE INFORMATION, INCLUDING SPARE CONDUCTORS. ONLY THOSE CONDUCTORS USED ARE SHOWN.

LOW VOLTAGE SWGR

NOTES:

- 8. 480V LOW VOLTAGE SWITCHGEAR BOARD FUNCTIONS ARE SHOWN ON SHEETS 2 THRU 15 AND SHEETS 18 AND 19 OF THIS DRAWING SERIES.
- 9. KEY INTLK SCHEME PERMITS EITHER 2 MAIN SUPPLY BKRS OR 1 MAIN SUPPLY BKR AND 2 EMERGENCY TIE BKRS TO BE CLOSED AT ONCE.
- 10. SEE WESTINGHOUSE ELECTRIC CORPORATION CONTRACT 76K3-85526 FOR 480V NON-CLASS IE SWITCHGEAR SCHEMATICS AND CONNECTION DIAGRAMS.
- 11. SEE GOULD/ITE CONTRACT 75K5-85583 FOR 6.9 KV AND 13.8 KV SCHEMATICS AND CONNECTION DIAGRAMS.
- 12. SUPPLY BREAKER ON 480V LOW VOLTAGE SWITCHGEAR IS ELECTRICALLY OPERATED WITH LOCAL CONTROL AT THE BOARD. THE EMERGENCY BREAKER IS MANUALLY OPERATED.
- 13. CONTACT CLOSURE FOR MAIN BUS UNDERVOLTAGE. THE TOTAL TIME DELAY OF THE COMBINATION OF 27 AND 27R RELAYS IS APPROXIMATELY 8 SEC AT 80% VOLTAGE.
- 14. CONTACT CLOSURE FOR LOSS OF CONTROL VOLTAGE.
- 15. CONTACT OPENS FOR MAIN BUS UNDERVOLTAGE. THE TOTAL TIME DELAY OF THE COMBINATION OF 27U AND 27UR RELAYS IS APPROXIMATELY 8 SEC AT 45% VOLTAGE.
- 16. CONTACT CLOSURE FOR MAIN BUS UNDERVOLTAGE. THE TOTAL TIME DELAY OF THE COMBINATION OF 27U AND 27UR RELAYS IS APPROXIMATELY 8 SEC AT 45% VOLTAGE.
- 17. CONTACT CLOSURE TO TRIP MAIN BREAKER FOR GROUND FAULT. THE TOTAL TIME DELAY OF THE COMBINATION OF 54 AND 54X RELAYS IS APPROXIMATELY 5 SEC.
- 18. CONTACT CLOSURE FOR LOSS OF CONTROL VOLTAGE AFTER 5 SEC TIME DELAY.

REFERENCE DRAWINGS AND DOCUMENTS:

| | |
|----------------------------------------------------------------------------------------------------------------------------------------|------------|
| WESTINGHOUSE AUXILIARY RELAY SCHEMATIC | 1245F06 |
| WESTINGHOUSE SCHEMATIC # AUXILIARY RELAY SCHEMATIC | 1245F09 |
| STATUS ENVIR. AND ALARM MONITORING SYSTEM (SEAMS) | 5G0640-1S |
| 125V CLASS IE DC POWER DISTRIBUTION SYSTEM | 5G0625-EU |
| ANNUNCIATOR AND SEQUENTIAL EVENTS RECORDING SYSTEM | 5G01640-1A |
| ANNUNCIATOR AND OPERATIONS RECORDING SYSTEM SCHEMATIC | 5G07364-0A |
| 480V SWITCHGEAR SX1 SYSTEM SCHEMATIC | 95W0741-ED |
| 500 KV SWVD 480V AC DISTRIBUTION CAB. 1 & 2 SINGLE LINE | 9N0756-ED |
| 161 KV SWVD 480V AC DISTRIBUTION CAB. 1 & 2 SINGLE LINE | 9N0756-ED |
| 480V MOTOR CONTROL CENTER SXCI SYSTEM SCHEMATIC | 5G01740-ED |
| TRANSFORMER YARD LIGHTING | 5X0428-RW |
| TRANSFORMER YARD 480V DISTRIBUTION CAB. 1 & 2 SINGLE LINE | 5X0780-ED |
| WHITE PLAINS TRANSFORMER YARD 480V DISTRIBUTION CAB. 1 & 2 DETAILS (SUB CONTRACTOR-KINNEY ELECTRICAL MFG. CO.) TVA CONTRACT 77N7-BR157 | 260858 |
| 250V NORMAL DC POWER DISTRIBUTION SYSTEM SCHEMATIC | 5G0640-EP |
| UNIT 2 480V NORMAL AC AUX POWER DISTRIBUTION SYSTEM SCHEMATIC | 5G02740-ED |
| REACTOR COOLANT SYSTEM SCHEMATIC | 5G01740-NC |
| 480V SWITCHGEAR 1XAB SINGLE LINE | 2W1726-ED |
| 480V SWITCHGEAR 1XBB SINGLE LINE | 2W1727-ED |
| 480V SWITCHGEAR 1XAB SINGLE LINE | 2W1726-ED |
| 480V SWITCHGEAR 1XBB SINGLE LINE | 2W1727-ED |
| 480V SWITCHGEAR 1XCB SINGLE LINE | 2W1728-ED |
| 480V SWITCHGEAR 1XDB SINGLE LINE | 2W1729-ED |
| 480V SWITCHGEAR 1XCA SINGLE LINE | 5M1730-ED |
| 480V SWITCHGEAR 1XDA SINGLE LINE | 5M1731-ED |
| 480V NORMAL AC AUX POWER DISTRIBUTION SYSTEM CABLE SCHEDULE | 5G01700-ED |
| WESTINGHOUSE ENGINEERING REFERENCE DRAWING | 91300D1 |
| TYPICAL SCHEMATICS MVSG CIRCUIT ARRANGEMENTS | 5G00749-9P |
| WESTINGHOUSE INTERNALS & MISC DIAGRAMS | 1245F05 |
| WESTINGHOUSE SCHEMATIC | 1245F05 |

SYMBOLS:

- TOC - CELL MOUNTED AUXILIARY SWITCHES ACTUATED BY BREAKER CELL POSITION
- OTS - OVERCURRENT TRIP SWITCH
- ◇ - KEY INTERLOCK

AMETER AND AMP TRANSDUCER TEST SWITCH SHOWN IN TEST POSITION

FUSE TABULATION (SEE SH36)

| GENERAL FUSE UNID | SIZE | SPECIFIC BD FUSE UNID | | SIZE | SPECIFIC BD FUSE UNID | | | | |
|-------------------|------|-----------------------|----------|------|-----------------------|------|-----|-----------|-----------|
| | | 1XA2 | 1XBR | | 1XA4 | 1XB4 | 1XA | 1RB | |
| EFUR-EDXA | -- | -- | -- | 15A | -- | -- | -- | EFUR-ED1A | EFUR-ED2A |
| EFUR-EDXB | -- | -- | -- | 15A | -- | -- | -- | EFUR-ED1B | EFUR-ED2B |
| EFUR-Y7A | 15A | EFUR-17A | EFUR-21A | -- | -- | -- | -- | -- | -- |
| EFUR-Y7B | 15A | EFUR-17B | EFUR-21B | -- | -- | -- | -- | -- | -- |
| EFUR-Y7C | 15A | EFUR-17C | EFUR-21C | -- | -- | -- | -- | -- | -- |
| EFUR-Y7D | 15A | EFUR-17D | EFUR-21D | -- | -- | -- | -- | -- | -- |
| EFUR-Y7E | 15A | EFUR-17E | EFUR-21E | -- | -- | -- | -- | -- | -- |
| EFUR-Y7F | 15A | EFUR-17F | EFUR-21F | -- | -- | -- | -- | -- | -- |
| EFUR-Y7G | 15A | EFUR-17G | EFUR-21G | -- | -- | -- | -- | -- | -- |
| EFUR-Y7H | 15A | EFUR-17H | EFUR-21H | -- | -- | -- | -- | -- | -- |
| EFUR-Y7I | 15A | EFUR-17I | EFUR-21I | -- | -- | -- | -- | -- | -- |
| EFUR-Y7J | 15A | EFUR-17J | EFUR-21J | -- | -- | -- | -- | -- | -- |
| EFUR-Y7K | 15A | EFUR-17K | EFUR-21K | -- | -- | -- | -- | -- | -- |
| EFUR-Y7L | 15A | EFUR-17L | EFUR-21L | -- | -- | -- | -- | -- | -- |
| EFUR-Y7M | 15A | EFUR-17M | EFUR-21M | -- | -- | -- | -- | -- | -- |
| EFUR-Y7N | 15A | EFUR-17N | EFUR-21N | -- | -- | -- | -- | -- | -- |
| EFUR-Y7O | 15A | EFUR-17O | EFUR-21O | -- | -- | -- | -- | -- | -- |
| EFUR-Y7P | 15A | EFUR-17P | EFUR-21P | -- | -- | -- | -- | -- | -- |
| EFUR-Y7Q | 15A | EFUR-17Q | EFUR-21Q | -- | -- | -- | -- | -- | -- |
| EFUR-Y7R | 15A | EFUR-17R | EFUR-21R | -- | -- | -- | -- | -- | -- |
| EFUR-Y7S | 15A | EFUR-17S | EFUR-21S | -- | -- | -- | -- | -- | -- |
| EFUR-Y7T | 15A | EFUR-17T | EFUR-21T | -- | -- | -- | -- | -- | -- |
| EFUR-Y7U | 15A | EFUR-17U | EFUR-21U | -- | -- | -- | -- | -- | -- |
| EFUR-Y7V | 15A | EFUR-17V | EFUR-21V | -- | -- | -- | -- | -- | -- |
| EFUR-Y7W | 15A | EFUR-17W | EFUR-21W | -- | -- | -- | -- | -- | -- |
| EFUR-Y7X | 15A | EFUR-17X | EFUR-21X | -- | -- | -- | -- | -- | -- |
| EFUR-Y7Y | 15A | EFUR-17Y | EFUR-21Y | -- | -- | -- | -- | -- | -- |
| EFUR-Y7Z | 15A | EFUR-17Z | EFUR-21Z | -- | -- | -- | -- | -- | -- |

480V MOTOR CONTROL CENTER

NOTES:

- 16. 480V MOTOR CONTROL CENTER BOARD FUNCTIONS ARE SHOWN ON DWG 5G0740-ED-01 AND ON SHEETS 16 THRU 34 OF THIS DWG SERIES.
- 17. SEE GOULD/ITE CONTRACT 76K5-86242 FOR 480V NON-CLASS IE MOTOR CONTROL CENTER LAYOUT DRAWING AND WIRING DIAGRAMS.
- 18. FIELD JUMPERS ARE SHOWN IN-FUNCTION WITHIN THE MOTOR CONTROL CENTER BOXES. JUMPER WIRING IS PERFORMED PER MOTOR CONTROL CENTER JUMPER LISTS. JUMPER DESIGNATIONS ARE FORMED BY PREFIXING THE SYSTEM JUMPER NUMBER WITH THE UNIT OF THE ENCLOSURE. EXAMPLE: 1ED-EMCC-34-EDJ18
- 19. ITC WIRING DIAGRAM NUMBERS SHOWN ARE PREFIXED BY WD-53893.
- 20. 480V MOTOR CONTROL CENTER LOADS ARE TABULATED ON MCC COMPUTERIZED CIRCUIT SCHEDULES.

REFERENCE DRAWINGS AND DOCUMENTS:

| | |
|---------------------------------------------|---------|
| WESTINGHOUSE 1XAI CONNECTION DIAGRAM UNIT D | 1245F36 |
| 1XB1 | 1246F05 |
| 1XC1 | 1246F11 |
| 1XC2 | 1246F12 |
| 1XC3 | 1245F60 |
| 1XC4 | 1245F15 |
| 1XC5 | 1245F16 |
| 1XA3 | 1245F25 |
| 1XA3 | 1245F27 |
| SX1 | 1246F29 |

SYMBOLS:

- - 480V MOTOR CONTROL CENTER COMPARTMENT TERMINAL

SYMBOLS:

- AM XXXX - INTERFACE TO STATUS, ENVIRONMENTAL, AND ALARM MONITORING SYSTEM (SEAMS)
- POINT NUMBER
- AN XXXX - ANNUNCIATOR SYSTEM INTERFACE
- POINT NUMBER
- OR XXXX - OPERATIONS RECORDING SYSTEM INTERFACE
- POINT NUMBER

PRC APERTURE CARD

Docket # 50-438 Control # 8304050536 Date 3-25-83 of Document REGULATORY DOCKET FILE

| | | | | |
|-----------------------------------------------------------------|---------|---------|---------|---------|
| 3 1133 | 3-25-83 | 1245F36 | 1245F36 | 1245F36 |
| REPLACED 5 AMP FUSES WITH 6 AMP FUSES | | | | |
| 2 91 | 3-25-83 | 1245F36 | 1245F36 | 1245F36 |
| MINOR CHANGES | | | | |
| 1 51 | 3-25-83 | 1245F36 | 1245F36 | 1245F36 |
| REMOVED NOTE DEFINING SCOPE OF P-0 ISSUE AND REVISE LVSG NOTES. | | | | |
| REV NO | REV NO | DATE | BY | CHKD |
| | | | | |
| | | | | |
| | | | | |

GENERAL UNIT 1
 SYSTEM SCHEMATIC
 480V NORMAL AC AUXILIARY POWER DISTRIBUTION SYSTEM

BELLEFONTE NUCLEAR PLANT
 TENNESSEE VALLEY AUTHORITY
 DIVISION OF ENGINEERING DESIGN

COMPANION DRAWINGS: 5G01740-ED-2 THRU 36

INSPECTED AND APPROVED FOR ISSUE

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