| REFERENCE DRAWINGS | |
|---|---|
| DRAWING NUMBER | TITLE |
| 2OW072-0P-1 | PLANT AC AUXILIARY POWER SYSTEM SINGLE LINE |
| 1GWF740-EI-6 | 480V SWGR 1EX2-A SYSTEM SCHEMATIC |
| | |
| | |

NOTES:

1. 480V SWGR PROVIDED ON CONTRACT NO. 76W3-83526.
2. ALL CKT BRKS ARE 3-POLE/600A FR WITH REAR MOUNTED CURRENT LIMITING FUSE ON LINE SIDE OF EACH POLE EXCEPT AS NOTED.
   600A FR BRKS HAVE 200,000A RMS SYM INTERRUPTING RATING AT 480V.
   1600A FR BRKS HAVE 200,000A RMS SYM INTERRUPTING RATING AT 480V.
   2000A FR BRKS HAVE 65,000A RMS SYM INTERRUPT AIR RATING AT 480V.
   AS NOTED, BRKS ARE EQUIPPED WITH AN ELECTRICAL LOCKOUT ATTACHMENT ACTUATED WHEN BKR IS TRIPPED AUTOMATICALLY BY THE ANNUNCIATOR
3. RELAYS SHALL BE THE TYPES SHOWN ON THIS DRAWING OR TVA APPROVED EQUAL.
4. THIS SWGR IS SUBJECT TO ALL REQUIREMENTS FOR CLASS 1E ELEC EQPT.
5. EACH DEVICE ASSOCIATED WITH THE SWGR BUS, TRANSFORMER, AND THE NORMAL OR TIE CKT BKRS, IS PART OF THE 480V CLASS 1E AC ADS PWR DISTRIBUTION SYS WITH UNIT AND SYS DESIGNATION 1EI. THE DEVICE UNID IS FORMED BY PREFIXING THE DESIGNATIONS SHOWN ON THE DWG WITH 1EI. EXCEPT AS NOTED. ALL OTHER BRKS 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 HEXAGON SYMBOL, EXCEPT AS NOTED. THE SWGR PNL NO. UNID DESIGNATIONS ARE FORMED AS FOLLOWS USING THE PNL NO (XX), AND THE TRAIN DESIGNATION (Y) A OR B: 1EI-ELVS-25XX-Y
6. KVA LOADS SHOWN ARE ESTIMATED MAXIMUM DEMAND.
7. SEE DWG 2OW072N-01 FOR LOADS THAT REQUIRE DIESEL PWR.
8. N/O-NON FUSE THIS BREAKER

SYMBOLS:

- XXX/LSG – SOLID STATE TRIP DEVICE WITH SENSOR RATING SHOWN
  L-LONG TIME DELAY (OVERLOAD)
  S-SHORT TIME DECAY (SELECTIVE TRIP)
  I-INSTANTANEOUS (FAULT CURRENT)
  G-GROUND FAULT (OPTIONAL)
- – INTERFACE FOR STATUS, ENVIRONMENTAL, AND ALARM MONITORING SYS (SEAMS)
- – CONNECTION TO REMOTE METER (UNIT CONTROL ROOM)
- – INTERFACE FOR REMOTE CONTROL
- – PRIMARY CONTAINMENT PENETRATION
- – KEY INTERLOCK
- XXX – UNIT AND SYS DESIGNATION (SEE NOTE 5)
- – RED INDICATING LIGHT
- ANN. – THIS FUNCTION TO BE MONITORED BY ONE OF THE ANNUNCIATION OR ALARM SYSTEM
- ✱ – WHEN BREAKER IS IN RACKED OUT (DISCONNECTED) POSITION USE SHIPPING BRACKETS TO INSURE STABILITY. DO NOT LEAVE BREAKER IN TEST POSITION.

| NO. | DESCRIPTION | DATE | BY | CHK | APP |
|---|---|---|---|---|---|
| 6 | 1133 | 1-14-81 | KRF | YES | S BY |
| | REPLACED 5 AMP FUSE WITH 6 AMP FUSE. | | | | |
| 5 | 467, 51 | 7-11-79 | KRF | YES | S BY |
| | REPLACED CV-7 RLY WITH CVD RLY & REPLACED 7 TO 7 SEC TDE AGASTAT WITH 5 TO 50 SEC TDE AGASTAT, & MINOR CHANGES. | | | | |
| 4 | 5,220,245,345 | 1-11-79 | KRF | YES | S BY |
| | DEN REVISIONS PER 51-VARIOUS, DISCONNECTED UNDER VOLTAGE LOAD SHEDDING RELAYS PER ECN 345. REPLACE TWO ELEC OPER MECH INTLK CB FDR WITH ONE ELEC OPER CB PER ECN 245. ADD ERCW BOOSTER PUMP PER ECN 220. | | | | |
| 3 | 134, 44, 51, 109, 83 | 5-18-78 | LDG | PDR | S.B. |
| | UPDATE FOR MAJOR CHANGES PER ECN 134 NON HT REMOVAL CAP PER ECN 83 INCORPORATED SEQNS PER LCN 96-VARIOUS. INCORPORATED UNID SYS, GEN REF PER ECN 51-VARIOUS, REPLACED 600A FR BKR WITH 1600A FR BKR PER ECN-109. | | | | |
| 2 | 1520 | 10-8-76 | KRF | YES | S BY |
| | ADDED COOLING FANS TO 480V SWGR JUMPER PER ECN 40 CHANGED LOAD IN PRESS HTR REMR FEEDER FROM 600KVA TO 1440KVA PER ECN 18. | | | | |
| 1 | 12, 20, 21 | 9-7-76 | KRF | YES | S BY |
| | CHG 480V DISTR SYS FROM DELTA TO GRD WYE AND ADDED GRD FAULT PROT PER ECN 12, REV LOADS PER ECN 20, ADDED PRESS HTR REMR, PER ECN 21 | | | | |

| | | | |
|---|---|---|---|
| DESIGN | R.M. WRIGHT | | |
| DRAWN | P.S. SINGLETON | | |
| CHKD | G.R. REED | | |
| SUPV | J.A. KEEN | ENGINEER | |

AUXILIARY BUILDING
UNIT 1

SINGLE LINE DIAGRAM
480V SWITCHGEAR 1EX2-A
1EI-ELVS-25-A

BELLEFONTE NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN

Q

| SUBMITTED | RECOMMENDED | APPROVED |
|---|---|---|
| R.M. Wright | T.S. Lee Jr. | F.F. Chandler |

| | | | | |
|---|---|---|---|---|
| KNOXVILLE | 2-9-79 | 88 | 1 | 2AWI728-EI-1 R6 |
| 45W719-3 | FSAR | | | ADDED TRAINS AS CONSTRUCTED |

INSPECTED AND APPROVED FOR ISSUE
R.M. Hodges
DESIGN PROJECT MANAGER

Target # 58-438
Control # 830605 0536
Date 5-25-83
of Document
REGULATORY DOCKET FILE

PRC APERTURE CARD