GENERAL NOTES:

1. THE SYSTEM SCHEMATIC REFLECTS THE IMPLEMENTATION OF THE SYSTEM CONTROL LOGIC AND SSCS INTERFACE DIAGRAM AND APPLICABLE CRITERIA REQUIREMENTS. THE CONTROL LOGIC AND SSCS INTERFACE DIAGRAM AND ITS REFERENCED DOCUMENTATION FOR THE SOLID STATE CONTROL SYSTEM MUST BE USED IN CONJUNCTION WITH THE SYSTEM SCHEMATIC IN EVALUATING CIRCUIT OPERATION.
   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 CONFIGURATION.
2. INTERFACE NUMBERS WERE ASSIGNED TO EACH POINT OF INTERFACE WITH THE SSCS. THESE NUMBERS APPEAR ON THE CONTROL LOGIC AND SSCS INTERFACE DIAGRAM AND THIS SCHEMATIC. IT'S PURPOSE IS TO FACILITATE MOVEMENT BETWEEN THESE DOCUMENTS.
3. SSCS CABLE SHIELDS ARE TERMINATED ON THE SHIELD GROUND BUS LOCATED ADJACENT TO THE TERMINAL BLOCKS. TERMINATION POINTS ON THE GROUND BUS ARE NOT DEDICATED TO A SPECIFIC CABLE.
4. ALL UNID AND CABLE DESIGNATIONS ARE PRECEDED BY 1EG, UNLESS OTHERWISE SHOWN.
5. FOR DESCRIPTION OF BREAKER OPERATION AND AUXILIARY SWITCH TRUTH TABLE SEE 5GW0749-RP-01.
6. 52H CONTACTS ARE SHOWN IN THEIR OPEN POSITION AND THEIR DESIGNATION IS SUFFIXED WITH -IN OR -OUT TO INDICATE THEY ARE CLOSED WHEN THE BREAKER IS RACKED IN OR RACKED OUT RESPECTIVELY.
7. 6.9KV CLASS 1E SWITCHGEAR 1ET1-A AND 1ET1-B INTERFACE TERMINATION POINTS ARE IDENTIFIED BY THE MANUFACTURER'S TERMINAL POINT NUMBER PRECEDED BY TVA'S PANEL DESIGNATION IN PARENTHESIS.

S1

S1 8. SEE SYSTEM EG CABLE PROGRAM FOR COMPLETE CABLE INFORMATION INCLUDING SPARE CONDUCTORS. ONLY THOSE CONDUCTORS USED OR TERMINATED ARE SHOWN.

S1 9. JUMPER DESIGNATIONS ARE FORMED BY PREFIXING THE J NUMBER SHOWN ON THE SCHEMATIC WITH THE UNID OF THE ENCLOSURE AND THE SYSTEM DESIGNATION EG. EXAMPLE 1EG-EWS-06-A-EGJ1.

S1 10. SPECIFIC ENTRANCES ARE INDICATED FOR CABLES ENTERING EQUIPMENT THAT HAS MORE THAN ONE ENTRANCE PER DIVISION OF SEPARATION. EXAMPLE: ENT A

11. ALL B&W DRAWING NUMBERS SHOWN WILL BE SUPERSEDED BY AS-BUILT DRAWINGS OF DIFFERENT NUMBERS. FOR A CROSS-REFERENCE BETWEEN THESE DRAWINGS SEE THE BELLEFONTE NUCLEAR PLANT MONTHLY STATUS REPORT OF MANUFACTURERS DRAWINGS.

12. NOR AND ALTERNATE SUPPLY BREAKERS ARE INTERLOCKED TO PROHIBIT SIMULTANEOUS CLOSING.

S1 13. BOP ISOLATOR CABLE SHIELDS THAT ARE SHOWN CONNECTED ARE TERMINATED ON THE SIGNAL GROUND BUS (SG) LOCATED ADJACENT TO THE TERMINAL BLOCKS. TERMINATION POINTS ON THE GROUND BUS ARE NOT DEDICATED TO A SPECIFIC CABLE.

BOP ISOLATOR DIGITAL OUTPUTS ARE SOLID STATE SWITCHING (9S SW) DEVICES.

REFERENCE DRAWINGS:

PLANT AC AUX PWR SYS SINGLE LINE ---------- 2GW0720-RP
SINGLE LINE DIAGRAM 6.9KV CLASS 1E SWGR 1ET1-A------ 2AW1722-EG
SINGLE LINE DIAGRAM 6.9KV CLASS 1E SWGR 1ET1-B------ 2AW1723-EG
MAIN SINGLE LINE GENERATOR 1 AND 500KV SWYD -------- 2NW0504-XE
MAIN SINGLE LINE 161KV SWYD ---------- 2NW0502-XB
TYPICAL SCHEMATIC MED VOLTAGE SWGR CKT ARRGT ------- 5GW0749-RP
CONTROL LOGIC AND SSCS INTERFACE 6.9KV CLASS 1E
AC AUX POWER DISTRIBUTION SYSTEM ---------- 2AW0900-EG
WIRING DIAGRAMS OXO-ER1B-3 250V DC SUP LTS & RSS
XFMR 1A & 2A MET ---------- 9CW0723-XO
WIRING DIAGRAMS OXO-ER1B-4 250V DC SUP LTS & GEN
1 & 2 MET ---------- 3CW0724-XO
WIRING DIAGRAMS OXO-ER1B-5 250V DC SUP LTS & RSS
XFMR 1B & 2B MET ---------- 9CW0725-XO
STATUS, ENVIRONMENTAL AND ALARM MONITORING SYSTEM --- 5GW0640-IS

SYSTEM SCHEMATIC 13.8KV NORMAL AC AUX POWER
DISTRIBUTION SYS ---------- 5GW1740-EA
SYSTEM SCHEMATIC STANDBY DSL GEN AND CONTROLS SYS -- 5GW1740-RT
SOLID STATE CONTROL SYSTEM (SSCS) ---------- 5GW0640-IL
S1 POWER DISTRIBUTION RELAY CABINET ---------- 5AW1651-JT
POWER DISTRIBUTION RELAY CABINET ---------- 5AW1661-JT
SINGLE LINE 125V CLASS 1E DC POWER
DISTRIBUTION SYS ---------- 5BW0625-EU
24KV MN GEN BUS, 13.8KV & 6.9KV USS & RSS
BUSES - PLAN ---------- 2BW2292-RP
MN TURB INSTM AND CONTROL SYSTEM ---------- 5GW1740-TC
SCHEMATIC DIAGRAM ANNUNCIATOR AND SEQUENTIAL
EVENTS RECORDING SYSTEM ---------- 5GW1640-IA

ITE (GOULD) IMPERIAL CORP. TVA CONTRACT 75K5-85583
ITE (GOULD) REFERENCE DRAWINGS:

ELEMENTARY AND SCHEMATIC DIAGRAMS, 6.9 KV
CLASS 1E SWGR 1ET1-A ---------- 808564,808565,808566,808567
ELEMENTARY AND SCHEMATIC DIAGRAMS, 6.9 KV
CLASS 1E SWGR 1ET1-B ---------- 808568,808569,808570,808571
CONNECTION DIAGRAM 6.9KV CLASS 1E
SWGR 1ET1-A ---------- 33-51014-D61
CONNECTION DIAGRAMS 6.9KV CLASS 1E
SWGR 1ET1-A ---------- 33-51014-D66 & 33-51014-D67
CONNECTION DIAGRAMS 6.9KV CLASS 1E
SWGR 1ET1-A ---------- 33-51014-D69
THRU 33-51014-D73
CONNECTION DIAGRAM 6.9KV CLASS 1E
SWGR 1ET1-A ---------- 33-51014-E74 S1
CONNECTION DIAGRAM 6.9KV CLASS 1E
SWGR 1ET1-B ---------- 33-51014-D262
CONNECTION DIAGRAM 6.9KV CLASS 1E
SWGR 1ET1-B ---------- 33-51014-D267
CONNECTION DIAGRAM 6.9KV CLASS 1E
SWGR 1ET1-B ---------- 33-51014-D269
THRU 33-51014-D273
CONNECTION DIAGRAM 6.9KV CLASS 1E
SWGR 1ET1-B ---------- 33-51014-E274
CONNECTION DIAGRAM 6.9KV CLASS 1E
SWGR 1ET1-B ---------- 33-51014-D363
INTERCONNECTION DIAGRAMS, 6.9KV
CLASS 1E SWGR 1ET1-A---------- 33-51014-D166 & 33-51014-D167
INTERCONNECTION DIAGRAMS, 6.9KV
CLASS 1E SWGR 1ET1-B ---------- 33-51014-D366 & 33-51014-D367
B&W NSSS, TVA CONTRACT NO. 71C62-54114-2
MAIN CONTROL ROOM PANEL WIRING DIAGRAMS -02-23785NF & 02-23786NF
S1 ELECTROMAX INSTRUMENTS INC, TVA CONTRACT 79K12-822988
FOR BOP ISOLATORS

SYMBOLS:

XXXXX / NGM — SEAMS (MONITORING SYSTEM POINT NO. XXXXX)
XXXX / AN — UNIT ANNUNCIATOR (MONITORING SYSTEM POINT NO. XXXX )
XXXX / OR — OPERATIONS RECORDER (MONITORING SYSTEM POINT NO. XXXX )
OP — DISCONNECTING CONTACT CLOSED IN FULLY CONNECTED POSITION
TP — DISCONNECTING CONTACT CLOSED IN THE TEST POSITION
TEST BLOCK
52H - CELL-MOUNTED CIRCUIT BREAKER AUXILIARY SWITCH ACTUATED BY THE POSITION OF THE REMOVABLE CIRCUIT BREAKER (SEE NOTES 6 AND 5)
52S - CELL-MOUNTED CIRCUIT BREAKER AUXILIARY SWITCH ACTUATED BY THE OPERATION OF THE CIRCUIT BREAKER MAIN CONTACTS (SEE NOTE 5)
S1 I ISOLATOR

APERTURE CARD

Docket # 50-438
Control # 8202090064
Date 820202 of Document
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Docket #
Control #
Date of Document
REGULATORY DOCKET FILE

COMPANION DRAWINGS:
5GW1740-EG-02 THRU 13,
9GW1740-EG-01 & 02
S1

| REV NO. | ECN NO. | DATE | DSGN | DRWN | CHKD | SUPV | ENGR | INSP | SUBM | RECM | APPR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | S1 MINOR CHANGES. | 1-31-77 | TCH | | | | | | | | |
| 1 | S1 REVISIONS PER S1 | 7-1-77 | | | | | | | | | |

DSGN J.C. HILL
DRWN J.W. JACKSON
CHKD L.E. WOOLLEY
SUPV S.A. MOSSBY
INSP
ENGINEER W. L. Allredge

GENERAL
UNIT 1

SYSTEM SCHEMATIC
6.9KV CLASS 1E AC AUX POWER
DISTRIBUTION SYSTEM

BELLEFONTE NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN
Q

| SUBMITTED | RECOMMENDED | APPROVED |
|---|---|---|
| W L Allredge | J L Spangler | R M Hodges |

KNOXVILLE 11-29-77 88 E 5GW1740-EG-01 R2

RECORD DRAWING AS CONSTRUCTED

CS3-1
PRINTS REQD-R
BR #
PROJ DWG SIZE F H
ME
EE 2
CE
AD
CO
ED 2
MD
GF
SW
BL
PA