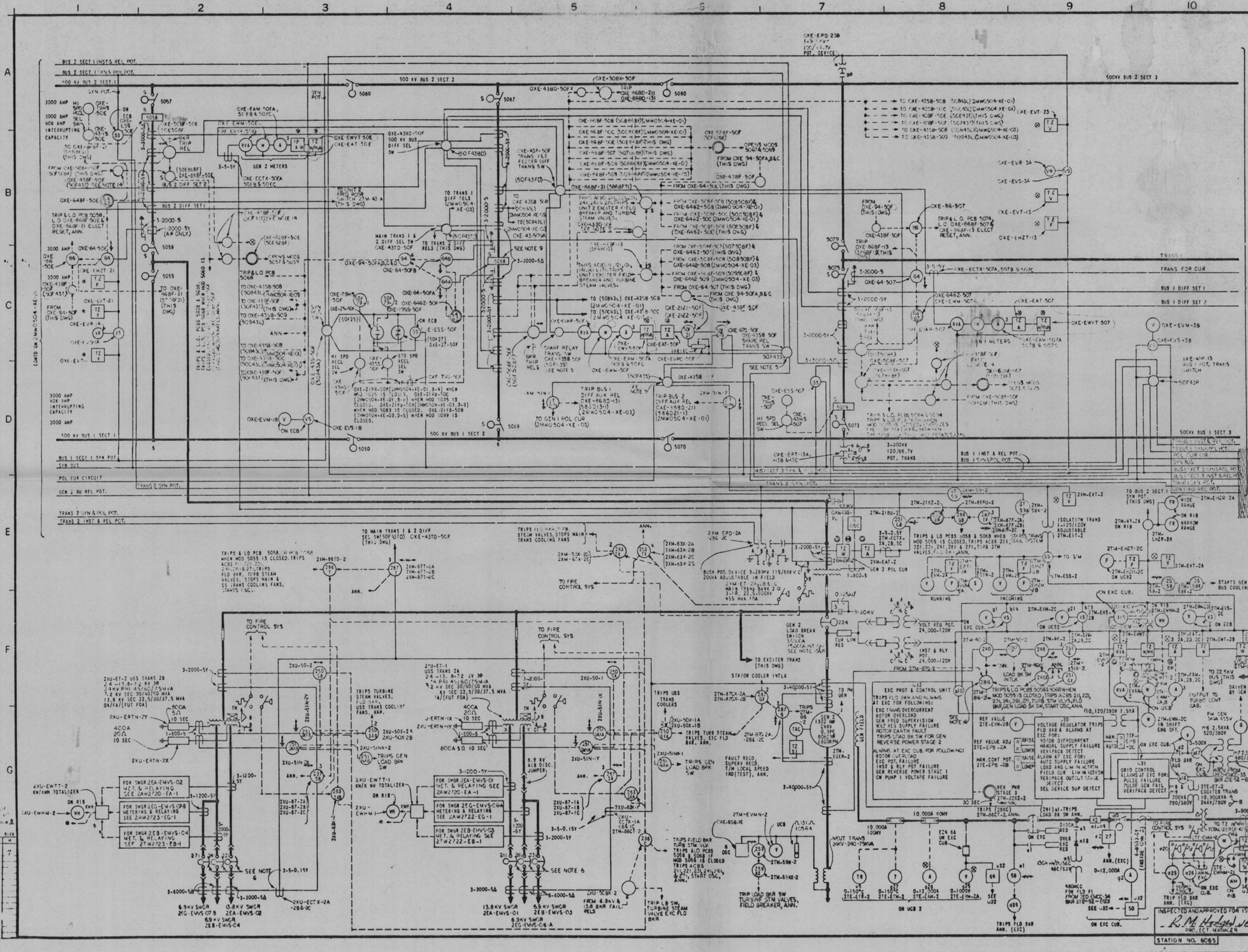

NOTES:

1. EACH 500KV BREAKER AND ITS ASSOCIATED MODS WILL BE TRIPPED WHEN MINIMUM INTERRUPTING PRESSURE OF THE BREAKER IS REACHED.
2. INSTRUMENTS MARKED WITH AN ⊕ HAVE AN OUTPUT TO THE DATA ACQUISITION TERMINAL.
3. THE GENERATOR LOAD BREAK SWITCH WILL BE USED FOR SYNCHRONIZING. TRIPPING WILL BE SUPERVISED BY LOAD BREAK INTERLOCK RELAY 27M-50.
4. THE COMPONENT NUMBERS IN PARENTHESES ARE NUMBERS FORMERLY USED AND ARE SHOWN FOR INFORMATION ONLY.
5. SPARE RELAY TRANSFER SWITCH OXE-435B-50F. (50F435) IS SHOWN IN FOUR PARTS.
6. IF A 6.9 OR 13.8KV SWITCHGEAR FEED BREAKER FAILS TO TRIP NORMALLY, THE LOAD BREAK SWITCH, 86F RELAY AND EXCITER FIELD BREAKER WILL BE TRIPPED AND THE TURBINE STEAM VALVES WILL BE CLOSED VIA 2XU-50BX-2 RELAY 45 SECONDS LATER.
7. EQUIPMENT WITH AN "S" ARE DESIGNED FOR REMOTE SUPERVISORY CONTROL.
8. INSTRUMENTS MARKED ⊕ HAVE AN OUTPUT FOR ANALOG BACKUP TO PSCC.
9. PCB 5068 IS SUPERVISORY CONTROLLED ONLY WHEN USED AS A SPARE LINE BREAKER.
10. EQUIPMENT DESIGNATIONS WHICH BEGIN WITH LOWER CASE LETTERS (g14,x2,ETC) ARE SHOWN ON BROWN-BOVERI CORPORATION APPARATUS LIST HA68-415-015 TVA CONTRACT TV62-54621.
11. THE BREAKER FAILURE LOCKOUT RELAY ASSOCIATED WITH EACH BREAKER WILL BE ENERGIZED WHEN THE BREAKER MINIMUM DIELECTRIC PRESSURE IS REACHED AND AT LEAST ONE ISOLATING MOD PHASE IS NOT FULLY OPEN.
12. INSTRUMENTS MARKED ⊕ HAVE AN OUTPUT FOR THE SYSTEM IC PROCESS COMPUTER.
13. INSTRUMENTS MARKED ⊕ HAVE AN OUTPUT FOR THE SYSTEM IC SEAMS COMPUTER.
14. UNIT BREAKER SELECTOR SWITCHES OXE-435B-50E (50E41) & OXE-435B-50F (50F42B) TRANSFER THEIR BREAKER FAILURE AUXILIARY RELAYS TO PCB 5068.
15. THE GENERATOR LOAD BREAK SWITCH WILL LOCK IN EXISTING POSITION WHEN MINIMUM INTERRUPTING AIR PRESSURE IS REACHED.
16. WHEN THE LOAD BREAK SWITCH TRIPS, THE LOCK OUT RELAY 2TM-86-2 SHALL BE ELECTRICALLY RESET ALLOWING PCB 5058 OR 5068 TO AUTOMATICALLY RECLOSE AND MAKE POWER AVAILABLE TO THE AUXILIARY EQUIPMENT BUSES.

REFERENCE DRAWINGS:

DRAWING NO.	TITLE
2BWG510-0006	DEVELOPMENT SINGLE LINE
2MW0502-XB-01	MAIN SINGLE LINE SH 1 161KV SWITCHYARD
2MW0504-XE-03	MAIN SINGLE LINE SH 3 GEN 1 & 500KV SWITCHYARD

PRC APERTURE CARD

Add watt/var meters to spare & unused meters per ECN 31
Add SF6 Gas Pressure Switch per ECN 31
Add SF6 failure relaying (miss) changed per ECN 1324 & 1947
Add SF6 failure relaying per ECN 1324 & 1947, add Bus tie change per ECN 1947
Minor changes per ECN 2
Minor changes per ECN 2, add GTs per ECN 8, ECN 31
Add new equipment, information, and modifications, trip bkrs & trip rlys per ECN 3
Changed fire control system ECN 10
Add & remove equipment, purchased equipment ECN 251, Revise per ECN 5 & ECN 11
Add equipment, information, and modifications, trip bkrs & trip rlys
Changed main & USS trans pressure trips per ECN 25 & Modified undervolt on load break switch operation per ECN 43
Changed USS trans 13.8KV GT ratio per ECN 100, Added load tap changers to USS trans per ECN 101, corrected computer inputs, changed test relaying relays to solid state & updated generator excitation system per ECN 47, redefined breaker failure relaying, added unique identifiers
Changed test line pressure relaying per ECN 53
Updated supervisory control system line numbers, added USS trans alarm GTs, minor changes per ECN 55
Changed USS trans breaker numbers, added test relaying of USS & exciter trans per ECN 67, Changed Medison line & Gen 1 in bays 17 & 25 per ECN 55, Changed rating of USS trans per ECN 17

REV	ECN NO.	DATE	DSGN	DRWN	CHKD	SUPV	ENGR	INSP	DSGN	RECM	APVD
DSGN	J.R. Morley										
DRWN	A. Spencer										
CHKD	J.R. Mincey										
SUPV	J.C. Stone										

INSP
VOL. 20/365
ENGINEER
C.A. Hillsley

SWITCHYARD

Docket # 50-390 & 50-391
Control # 83-03
Doc 3 of Documents
REGULATORY DOCKET FILE

WIRING DIAGRAMS
MAIN SINGLE LINE SHEET 2
GENERATOR 2 AND 500 KV SWITCHYARD

BELLEFONTE NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN

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SUBMITTED	RECOMMENDED	APPROVED
J.L. Bradley	T.S. Gordon	R.M. Chandler

KNOXVILLE 6-24-74 88 E 2MW0504-XE-02 RB

RECORD DRAWING AS CONSTRUCTED

THIS DRAWING IS UNDER