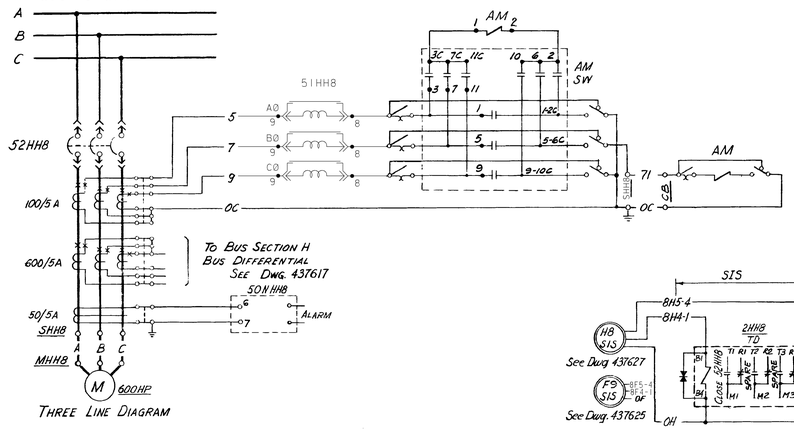
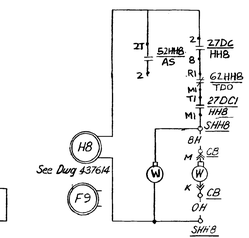
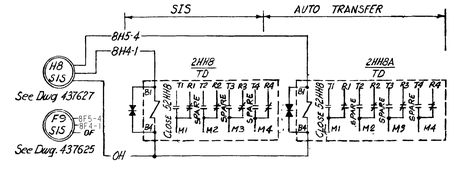






CONTACTS	POSITION A	INT	B	INT.	C
1		X	X	X	X
2	X	X			
3		X	X		
4		X	X	X	X
5		X	X		
6			X	X	X
7			X	X	X
8		X	X	X	X
9		X	X	X	X
10				X	X
11				X	X

AMMETER SWITCH AM/SW
Used at location SHH8 , SHF9

CONTACTS	POSITIONS TRIP	AFTER TRIP	CLOSE	REMARKS
1-1C			X	THIS DWG
2C-2	X			THIS DWG
3-3C	X		X	SPARE
4C-4			X	SPARE
5-5C		X	X	SPARE
6C-6				
7-7C		X	X	SPARE

CONTROL SWITCH 52HH8/CS , 52HF9/CS
Used at location SHH8 , SHF9
Spring Return to Neutral

CONTACTS	POSITION STOP	NEUT	START	REMARKS
A	X			This Dwg.
B			X	This Dwg.
C		X	X	This Dwg.
D	X	X		This Dwg.
E		X	X	This Dwg.
F			X	Spare

CONTROL SWITCH 52HH8/CS , 52HF9/CS
Used at location CB , H01
Spring Return to NEUTRAL

CONTACTS	POSITIONS AUTO	MANUAL	REMARKS
A		X	SPARE
B	X		THIS DWG
C		X	SPARE
D	X		SPARE
E		X	SPARE
F		X	SPARE
G		X	SPARE
H		X	SPARE

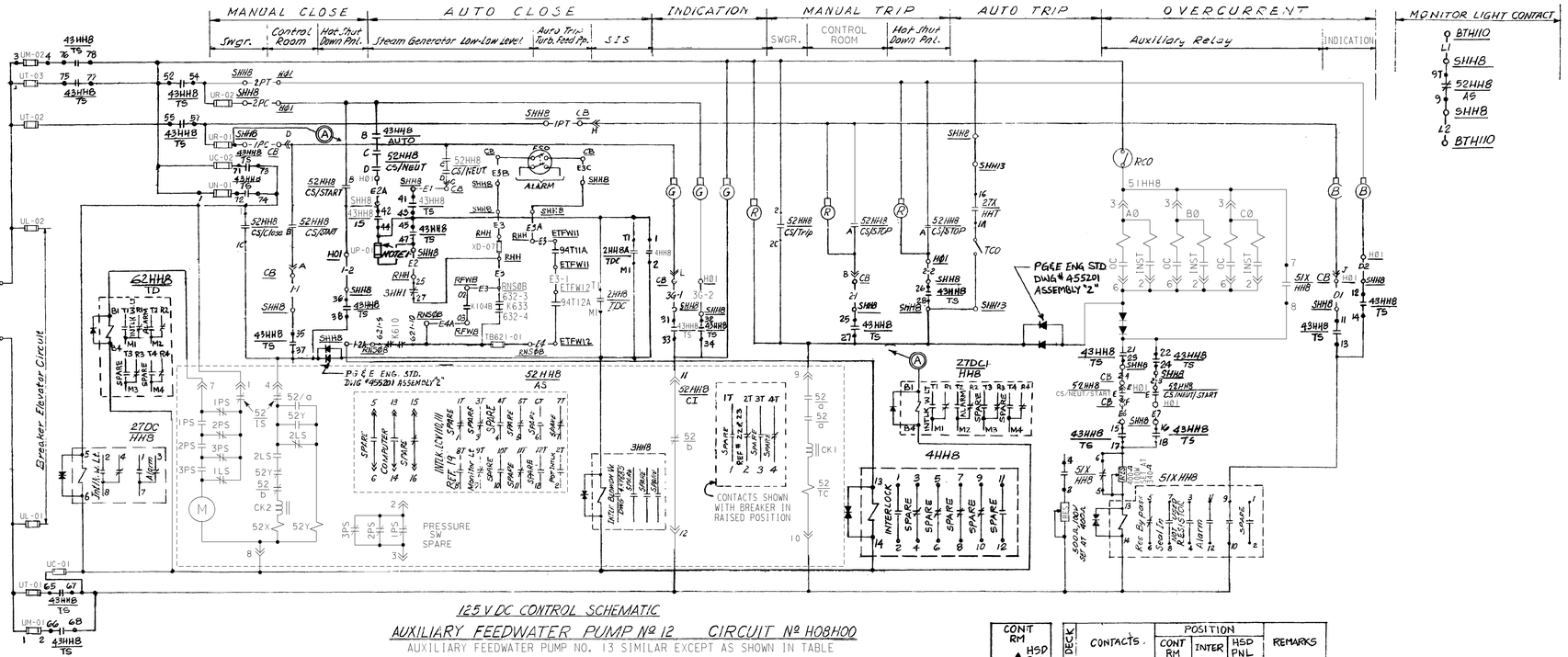
MODE SELECTOR SWITCH 43HH8, 43HF9
USED AT LOCATION H01
NO SPRING RETURN

TABLE of DEVICES

DEVICE Nº	FUNCTION	RATING	MFR	TYPE	CAT./DWG Nº	REMARKS
2HH8 2HF9	Safety Injection Signal Timing Rel.	120V AC	AGASTAT	ETR	ETR1413D	Time Delay 2-60 Sec
2HH8A 2HF9A	Auto Transfer Timing Relay	120V AC	AGASTAT	ETR	ETR1419D	Time Delay 2-60 Secs
3HH1, 3HF1	Diesel Auto Transfer Interlock Rel.	—	—	—	(5) (9)	
3HH8, 3HF9	Aux Feedwater Pump Auto Start Rel.	125V DC	G.E. Co.	IC2820	IC2820-A1D3CG3L	
27X-HH7, HF7	4KV Bus U/V Trip Auxiliary Rel.	—	—	—	(5) (9)	
27DC/HH8, HF9	Control Bus DC Undervoltage	125V DC	G.E. Co.	HGA		Trips Oil Bus Undervoltage And Transfer To Diesel
27DCI-HH8, HF9	CONTROL BUS DC UNDERVOLTAGE	125VDC	AGASTAT	EGPD		ALARM ONLY
62HH8, HF9	BKR CLOSING SPRING TIME DELAY RELAY	125VDC	AGASTAT	ETR	ETR1A03G	T.D. 1-30 SEC
50NHH8, HF9	Ground Overcurrent Sensor	—	—	—	(2)	Alarm Only
51 HH8, HF9	Overcurrent Relay	—	—	—	(2)	
51XHH8, HF9	Overcurrent Auxiliary Relay	24V DC	G.E. Co.	HFA	12HFA51A16M	
52HH8, HF9	Air Circuit Breaker	—	—	—	(2)	Rec. No. 66 3332
52HH8 52HF9 CI CI	Air Ckt. Bkr. Cell Interlock	—	—	—		Part Of Switchgear
K633	Steam Generator Lo-Lo Level Aux Rel	—	—	—	(16) (17) (20)	
43HF9/T9	CONTROL TRANSFER SW.	125VDC	ELECTRO SW	24	249078-2	
43HH8/T9	↓	↓	↓	↓	↓	
4HH8, 4HF9	CONTROL CKT INTERPOSING RELAY	125VDC	G.E. CO.	HFA	12HFA51A42F	
94T11A, 94T12A	Main Feedwater Pump Tripping Rel.	—	—	—	(7)	
K610 K610 SISA SISB	Safety Injection Interlock Blk. Rel.	—	—	—	(16) (17) (20)	
K104A	AMSAC SYSTEM (TRAIN A)	—	W.E.	—	(14)	
K104B	AMSAC SYSTEM (TRAIN B)	—	W.E.	—	(14)	

NOTE

1. FUSE PROVIDES ISOLATION FOR CABLE SPREADING ROOM FIRE WHEN TRANSFERED TO HSD PANEL



MOTOR	AMSAC SYS DEV	AMSAC SYS LOC	SIS BLOCK DEVICE	SIS BLOCK LOC	SIS BLOCK CONTACT INTERLOCK	AUX RELAY DEVICE Nº	INTERLOCK CONTACT CKT NO.	INTLK. AUX. FW. MOV'S 8 — 8T
Nº 12	K104B	RFWB	K610	RNS0B	621-9 — 621-10	3HH8	H08H14	LCV110, 111
Nº 13	K104A	RFWA	K610	RNS0A	621-9 — 621-10	3HF9	F09H14	LCV113, 115

DECK	CONTACTS	POSITION CONT RM	INTER	HSD PNL	REMARKS
1	11 — 13	X			THIS DWG
	12 — 14			X	THIS DWG
	15 — 17	X			THIS DWG
	16 — 18			X	THIS DWG
2	21 — 23	X			THIS DWG
	22 — 24			X	THIS DWG
	25 — 27	X			THIS DWG
	26 — 28			X	THIS DWG
3	31 — 33	X			THIS DWG
	32 — 34			X	THIS DWG
	35 — 37	X			THIS DWG
	36 — 38			X	THIS DWG
4	41 — 43	X			THIS DWG
	42 — 44			X	THIS DWG
	45 — 47	X			THIS DWG
	46 — 48			X	SPARE
5	51 — 53	X			SPARE
	52 — 54			X	THIS DWG
	55 — 57	X			THIS DWG
	56 — 58			X	SPARE
6	61 — 63	X			SPARE
	62 — 64			X	ALARM, REF 21
	65 — 67	X			THIS DWG
	66 — 68			X	THIS DWG
7	71 — 73	X			THIS DWG
	72 — 74			X	THIS DWG
	75 — 77	X			THIS DWG
	76 — 78			X	THIS DWG

TRANSFER SWITCH: 43HH8/TS , 43HF9/TS
LOC: SHH8, SHF9

EQUIPMENT LOCATION NUMBERS

- CB Control Board Condensate & Feedwater
- H01 Hot Shut Down Remote Control Panel 1
- MHH8 Auxiliary Feedwater Pump Nº 12
- SHH8 Switchgear 4KV Bus H Cubicle 8
- RHH Engineer Safeguards Relay Board Bus H
- ETFW11 Equipment Cabinet FWP Turbine Nº 11
- RNS0B Nuclear Safeguard Output Rack - Train B
- BTH110 Terminal Box Area H Nº 110

REFERENCES

1. Description of Elec. Schem., Dwg., Symbols & Ckt. Designations	Dwg. Nº 050003
2. Single Line Meter & Relay 4160V System Sh 2 (Bus F, G, H)	Dwg. Nº 437533
3. Schematic Diagram Potential & Synchronizing 4160V Sys.	Dwg. Nº 437614
4. Schematic Diagram 4160V Bus F Automatic Transfer	Dwg. Nº 437625
5. Schematic Diagram 4160V Bus G Automatic Transfer	Dwg. Nº 437626
6. Schematic Diagram 4160V Bus Differential Sh. 2	Dwg. Nº 437617
7. Schematic Diagram Feedwater Turbine Pump	Dwg. Nº 437567
8. Single Line Meter & Relay 125 V DC SYSTEM	DWG Nº 437546, 445076
9. Schematic Diagram 4160 V. Bus H Automatic Transfer	Dwg. No. 437627
10. Equipment Location, No.5	Dwg. No. 101900
11. Piping Schematic Feedwater System	Dwg. Nº 102003
12 Logic Diagram Auxiliary Feedwater Pumps	Dwg Nº 19403
13 Schematic Diagram Main Annunciator Sh 1	Dwg. Nº 501121
14 (M) ANSAC SYSTEM	Rec. No. 6008434
15. Schematic Diagram Steam Gen. Blowdown Valves	Dwg. Nº 437685
16. (M) Function Diagrams	Rec. No. 663195
17. (M) Solid State Protection System	Rec. No. 663231
18. Schematic Diagram, Monitor Light Box C	Dwg. Nº 437698
19 SCHEMATIC DIAG. AUX FW MOV'S	DWG. NO. 437507
20. SCHEMATIC DIAG, SSPS OUTPUT RELAYS, TR A, TR B. ___ DWGS 501869, 5030B5	
21. SCHEMATIC DIAG MAIN ANNUNCIATOR	DWG # 437100
22. SID MAIN ANNUNCIATOR SH. 16	DWG # 501136
23. SID MAIN ANNUNCIATOR SH 17	DWG # 501138
22. P.D.S. CONTROL CIRCUITS SCHEMATIC DIAGRAM _____ REC NO. 6009838-69	

P.G.&E. SYSTEM PHASE SEQUENCE A-C-B

NUCLEAR SAFETY RELATED

MOTOR	MOTOR LOC.	CKT BKR. Nº	CIRCUIT Nº	BUS SECT.	125 V DC CKT. Nº	BUS UNDERVOLTAGE RELAY	LOC.	CONTACT TRIP	AUTO TRANSFER BLOCKING RELAY	LOC	CONTACT INTERLOCK	FEEDWATER TURBINE NO. 11 TRIP RELAY	LOC	CONTACT INTLK	FEEDWATER TURBINE NO. 12 TRIP RELAY	LOC	CONTACT INTLK	STM. GEN. LO-LO LEVEL TRAIN A DEVICE	LOC	CONTACT	STMGEN LO-LO LEVEL TRAIN B DEVICE	LOC	CONTACT	ALARM CIRCUIT Nº5 AUTO TRIP TURB FWP CUT OUT	OVERCURRENT	GROUND OVERCURRENT	TRANSFER OF CONTROL	CONT. BUS DC UNDERVOLT.	COMPUTER CKT. Nº: RUNNING
Nº 12	MHH8	52HH8	H08H00	H	31AD	27X HHT	SHH13	16 — 14	3HH1	RHH	25 — 27	94T11A	ETFW11	—	94T12A	ETFW12	—	——	——	——	K633	RNS0A	K323-1H1-G324	AY2442DH	AI 2415DH	AI 2417DH	AY5072 DH	AV4207DH	CY2845DH
Nº 13	MHF9	52HF9	F09H00	F	13D	27X HFT	SHF8	22 — 28	3HF1	RHF	25 — 37	94T11A	ETFW11	—	94T12A	ETFW12	—	K633	RNS0A	K323-1H1-G324	——	——	——	AY2441DF	AI 2416DF	AI 2418DF	AY5070 DF	AV4407DF	CY2846DF

KEY DWG. SECTION 6

UNIT 1

DATE	
	11-06-2014
D.D.	PNWB
R.E.	KJD3
I.V.	N/A
P.E.	N/A

REVISION DESCRIPTION: REVISED PER DFT-7-2838

ELECTRICAL
SCHEMATIC DIAGRAM
AUXILIARY FEEDWATER PUMPS

DIABLO CANYON POWER PLANT
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CALIFORNIA

DWG SCALE:	
BILL OF MATL:	
SUPSDS:	
SUPSD BY:	

DRAWING	SHEET	PAGE	REV
437583	1	0	25

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DGN=437583.dgn
CAD User=PNWB Date: 11-06-2014
MPG 4 Size
OLD4 OUTLINE
OLD4 CUT
DRAWING NUMBER 437583 1