



AUXILIARY FEEDWATER PUMP N°22 CIRCUIT N° H08H00
Auxiliary Feedwater Pump N°23 Similar Except as Shown in Table

MOTOR	MOTOR LOC	AMSAAC SYSTEM		CKT BKR N°	CIRCUIT N°	BUS SECT	125 V DC CKT N°	BUS UNDERVOLTAGE			AUTO TRANSFER BLOCKING			FEEDWATER TURBINE #9 TRIP			FEEDWATER TURBINE #8 TRIP			STG A GEN LO LO LEVEL TRAIN A			STG H GEN LO LO LEVEL TRAIN B			ALARM CIRCUIT N°S		COMPUTER CKT N°S		SYS. BLOCK			AUX RELAY		INTLK AUX F.W MOV'S		
		DEVICE	LOC					RELAY	LOC	CONTACT TRIP	RELAY	LOC	CONTACT INTERLOCK	RELAY	LOC	CONTACT INT'LK	RELAY	LOC	CONTACT INT'LK	RELAY	LOC	CONTACT INT'LK	DEVICES	LOC	CONTACT	DEVICES	LOC	CONTACT	DEVICES	LOC	CONTACT	DEVICES	LOC	CONTACT	DEVICES	LOC	CONTACT
N° 22	MHHB	KIOA3	RFBWB	52HNB	H08H0B	F	314D	27Y HHT	SWH12	V6—11—24	3HH1	RHN	RS—H—17	9472A	—	—	—	K633	—	—	—	—	—	—	—	AI 2415D	AI 2417DH	AY5072DN	AV4207DH	CY2845DH	K610	RNSDB	—	3PHR	F08H1	LCV10J	I1
N° 23	MHHF	KIOA4	RFBWA	52HFB	E09H0D	F	113D	27Y HFT	SWH21	V6—11—24	3HH1	RNF	RS—H—31	9472A	—	—	—	K633	—	—	—	—	—	—	—	AI 2416D	AI 2418D	AY5070DS	AV4407DH	CY2846DF	K610	RNSDB	—	3PHR	F08H1	LCV10J	I1

TABLE OF DEVICES						
DEVICE NO	FUNCTION	RATING	MFR	TYPE	CAT/LWG#	REMARKS
2HH8 2HF9	SAFETY INJECTION SIGNAL TIMING RELAY	120Y AC	AGASTAT	ETR	ETR1413D	TIME DELAY 2-60 SEC
2HH8A 2HF1A	AUTO TRANSFER TIMING RELAY	120Y AC	AGASTAT	ETR	ETR1413D	TIME DELAY 2-60 SEC
210C 4HH 8H9	CONTROL BUS DC UNDERVOLTAGE RELAY	125V DC	AGASTAT	ECPO		
4HH4 8H9	BAR CLOSING SPRING TIME DELAY RELAY	125V DC	AGASTAT	ETR		
3HH1 3HF1	Diesel Auto Transfer Interlock Bit				(5) (4)	
3HH3 3HF3	Aux Feedwater Pump Auto Start Rel	125V1C	GE Co	1C2820	1C 2820-5	
27X 4HH1	4RY BUS UV Trip Auxiliary Relay				(5) (4)	
270CH8 3HF	Control Bus DC Under Voltage	125V DC	GE Co	HGA		Phos on Bus Undervoltage Aux Transfer 20 Percent
4HH8 4HF9	CONT CRT INTERPOSING RELAY	120V DC	GE Co	HFA	12HFA1442F	
50HH8 HF9	Ground Overcurrent Sensor	—	—	—	(2) (9)	Alarm Only
51 HH8 HF9	Overcurrent Relay	—	—	—	(2) (9)	
51X HH8 HF9	Overcurrent Auxiliary Relay	24V DC	GE Co	HFA	12HFA1444H	
52 HH8 HF9	Circuit Breaker	—	—	—	(2) (9)	Rec No 6009838
52H8 52HF9	Oil Bar Bell Interlock	—	—	—		Part of Junkheiser
6K33	Steam Generator Lo Lo Level Aux Rel	—	—	—	(17) (1) (2)	
43HH8 43HF9	CONTROL TRANSFER SWITCH	125V DC	ELECTRO SWITCH	2A	249078 2	
K10A, K10AB	AMSAC System	—	W E	—	6008434 4A5	
94T0A, 94T2A	Main Feedwater Pump Tripping Rel	—	—	—	(7)	
56A 56B 57A 57B	Safety Injection Interlock Bit Rel	—	—	—	(17) (18) (20)	

CONTACTS	POSITIONS			REMARKS
	TRIP	AFTER TRIP CLOSE	CLOSE	
1 -11-1C			X	THIS DNG
2C-11-2	X			THIS DNGK
3-11-3C	X		X	SPARE
4C-11-4			X	SPARE
5-11-5C		X X		SPARE
5C-1				
7-11-7C			X	SPARE
7C-1				

CONTACTS	POSITION			REMARKS
	STOP	NEUT	START	
— —	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

CONTACTS	POSITION		REMARKS
	AUTO	MANUAL	
—		X	ALARM REPT
—	A		THIS ON
—	B	X	SPARE
—	C		SPARE
—	D	X	SPARE
—	E	X	SPARE
—	F	X	SPARE
—	G	X	SPARE
—	H	X	SPARE

KEY	CONTACTS	POSITION			REMARKS
		CONT ROY	INTER	HSD PIL	
1	11-11-11-13				THIS DNG
6	12-11-11-14		X		THIS DNG
7	13-11-11-15		X		THIS DNG
4	16-11-11-18			X	THIS DNG
5	21-11-11-23	X			THIS DNG
2	22-11-01-04			X	THIS DNG
3	22-11-02-05	X			THIS DNG
8	26-11-22-28		X		THIS DNG
9	31-11-31-33	X			THIS DNG
10	34-11-34-35			X	THIS DNG
11	35-01-01-37	X			THIS DNG
12	36-01-01-38	X			THIS DNG
13	41-01-41-43		X		THIS DNG
14	42-01-42-44		X		THIS DNG
15	45-01-47-47	X			THIS DNG
16	46-01-48-48			X	SPARE
17	48-01-49-49			X	SPARE
18	52-01-54-54			X	THIS DNG
19	55-01-51-57	X			THIS DNG
20	56-01-51-58			X	SPARE
21	57-01-51-59			X	SPARE
22	64-01-61-64			X	ALARM RR 22
23	65-01-61-67	X			THIS DNG
24	66-01-61-68	X			THIS DNG
25	71-01-71-73			X	THIS DNG
26	72-01-72-74			X	THIS DNG
27	73-01-73-77			X	THIS DNG
28	77-01-77-78			X	THIS DNG

REFERENCES		DWG. NO.
1	Description of Elec. Schem. Diag. Symbols & Cdr Designations	050003
2	Single Line Meter & Relay 4160V System Sh 2 (Bus F)	441229
3	Schematic Diagram Potential & Synchronizing 460V Sys Sh 2	441340
4	Schematic Diagram 4160V Bus F Automatic Transfer	441352
5	Schematic Diagram 4160V Bus H Automatic Transfer	441354
6	Schematic Diagram 4160V Bus Differential Sh 2	441343
7	Schematic Diagram Feedwater Turbine Pumps	441270
8	Single Line Meter & Relay 125 VOLT D.C. System	441240
9	Single Line Meter & Relay 4160V System Sh 3 (Bus G & H)	441230
10	Equipment Location No.	050013
11	Piping Schematic Feedwater System	108003
12	Logic Diagram Auxiliary Feedwater Pumps	102800
13	Schematic Diagram Main Annunciator Sh 1	500771
14		
15	Schematic Diagram Steam Gun Blowdown Valves	441461
16	Schematic Diagram, Monitor Light Box	441454
17	Function Diagrams	REC NO. 663195
18	Solid State Protection System	REC NO. 663231
19	Schematic DIAG AUX FEEDWATER MOV'S	DWG NO. 41901
20	SCHEM DIAG SPSs OUTPUT RLYS, TR A TR B	DWG NO. 503089, 503093
21	ATWS MITIGATION SYSTEM ACTION RUTHERFORD (AMASC)	DWG NO. 600843A
22	SCHEMATIC DIAGRAM MAIN ANNUNCIATOR, SH 22	DWG NO. 441280
23	P.D.S. CONTROL CIRCUITS SCHEMATIC DIAGRAM-REC.	DWG NO. 6009838-B