

120V AC SCHEMATIC
LCV 106 STEAM GEN. 21 AUX. FEEDWATER SUPPLY MOV. CKT. NO. G44P00
 STEAM GEN. AUX. FEEDWATER SUPPLY MOV'S SIMILAR EXCEPT AS SHOWN IN TABLE

VALVE NO	DESCRIPTION	FW PUMP DISCH	MOTOR LOC.	CIRCUIT BREAKER NO	CIRCUIT BREAKER LOC.	BUS SECT.	CIRCUIT NO	VALVE POS SWITCH NO	ALARM CKT NOS	C.O. SW. POSITION	ERFDS
LCV 106	STM. GEN. 21 AUX. FW SUPPLY MOV.	27	MPG44	52-26-44	2G	G44P00	46		A14308D/A15066D	NORMAL CUT OUT	MUX06-20-1
LCV 107			MPG66	52-26-68	2G	G66P00	47		A14308D/A15066D	NORMAL CUT OUT	MUX06-20-2
LCV 108			MPG69	52-26-69	2G	G69P00	48		A14308D/A15066D	NORMAL CUT OUT	MUX06-20-3
LCV 109			MPG70	52-26-70	2G	G70P00	49		A14308D/A15066D	NORMAL CUT OUT	MUX06-20-4

TABLE OF DEVICES

DEVICE NO	FUNCTION	RATING	MFR.	TYPE	CAT/DWG#	REMARKS
52HB/AS 52HF/AS	4160V AIR CIRCUIT BREAKER				REF. DWG# 11	CONTACT CLOSING WHEN AUX FW PUMP BKR IS CLOSED
42-26-44, 42-26-69, 70	480V AC MOTOR STARTER REVERSING		WE Comp.		REF. DWG# 10	
43X-26-44, 43X-26-69, 70	CONTROL TRANSFER RELAY	120VAC	ELECTRO-SW. CORP.	SERIES 26 LDR	7803 F	HAND RESET
42-2F-49 42-2F-54	AC CONTACTOR	120VAC	WE Comp.	A201	A201K2BA	
49-26-44, 68 49-26-49, 70	MOTOR OVERLOAD RELAY		WE Comp.			PART OF MOTOR STARTER
49X-26-44, 68 49X-26-69, 70	MOTOR OVERLOAD AUXILIARY RELAY		WE Comp.			PART OF MOTOR STARTER
52-26-44, 68 52-26-69, 70	480V AC AIR CIRCUIT BKR		WE Comp.		REF. DWG# 10	
LCV106, 107, 108, 109	STM. GEN. 21 AUX. FW SUPPLY LEVEL CONT. %					
POS	LCV POSITION SWITCH					SEE TABLE FOR SW NOS
HIC	HAND INDICATING CONTROLLER					SEE TABLE FOR NOS
LCV10, 11, 13, 15	STM. GEN. 21 AUX. FW SUPPLY LEVEL CONT. %					
TS	TORQUE SWITCH					
P0M10, 11, 13, 15	LCV POSITION MONITOR	120VAC				
HC8X, 87X, 88X, 89X	AUX FW FAIL TO MANUAL AUX RLY	24VDC	P & B	KUP	KUP-14015-24	
CHC86FTM CHC87FTM CHC88FTM CHC89FTM	FAIL TO MANUAL SIGNAL TO AUX FW HAND CONTROLLERS	24VDC	TRICONEX		16	CONTACTS OPEN TO FAIL THE HAND CONTROLLER TO MANUAL

EQUIPMENT LOCATION NUMBERS

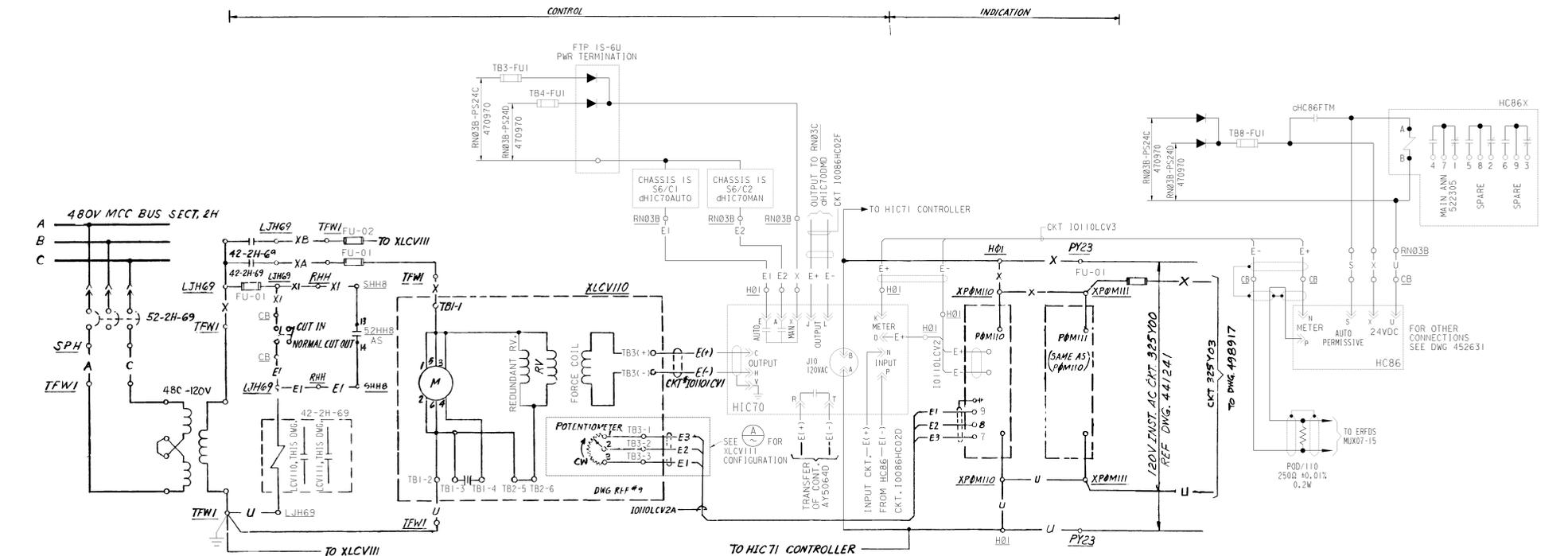
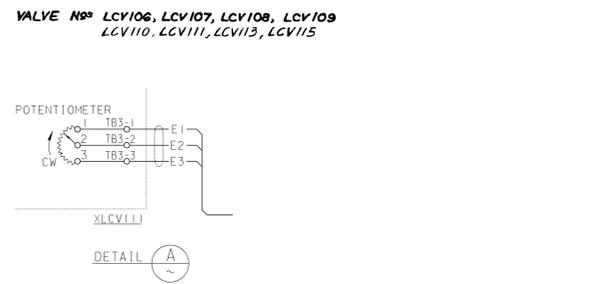
SPG - 480V MOTOR CONTROL CENTER BUS SECTION 26
 MPG44 - MOTOR OPERATED VALVE LCV106
 CB - CONTROL BOARD, CONDENSATE & FEEDWATER
 HO1 - HOT SHUTDOWN CONTROL PANEL, FEEDWATER
 XLCV110 - INSTR. #8 LCV 110, TERM. BOX HYDRAULIC ACTUATOR
 XP0M10 - P0M10, LOCAL MOUNTED

NOTES

- SWITCH OPENS ON MECHANICAL TORQUE DURING OPENING CYCLE.
- CLOSING CYCLE OR FULLY CLOSE VALVE.
- FIELD TO INSTALL JUMPER IF TORQUE BRATING IS REQUIRED.

REFERENCE DRAWINGS

- DESCRIPTION OF ELECT. SCHEMATIC DIAG'S, SYMBOLS & CKT. DESIG. DWG# 050003
- EQUIPMENT LOCATION NUMBER LIST 103013
- SINGLE LINE METER & RELAY DIAG., 480V SYSTEM BUS SECT. 2F 441237
- SINGLE LINE METER & RELAY DIAG., 480V SYSTEM BUS SECT. 2H 441239
- PIPING SCHEMATIC FEEDWATER SYSTEM 108003
- INSTRUMENT SCHEMATIC MULTIVARIABLE INSTRUMENT SYSTEMS 108036
- SCHEMATIC DIAGRAM MAIN ANNUNCIATOR 5A/1 500771
- SINGLE LINE METER & RELAY DIAG., 120V INSTRUMENT A.C. 441241, 2
- LCV10, 11, 13, & 15 ELECTRO-HYDRAULIC ACTUATOR - SHT. 51 663165
- SINGLE LINE METER & RELAY DIAG., 480V SYSTEM BUS SECT. 2G 441238
- SCHEMATIC DIAGRAM AUX. FEEDWATER PUMPS 441302
- BLOCK DIAGRAM - ERFDS - TECH. SUPPORT CENTER 445297
- SINGLE LINE METER & RELAY DIAG., 120V INSTRUMENT AC 445390
- SCHEMATIC DIAGRAM STEAM GEN. MAIN FW SUPPLY BYPASS VLVS 498917
- 15 498918
- SAFETY RELATED PROCESS CONTROL SYS RACKS FRS 663195-41
- MAIN ANNUNCIATOR SCHEMATIC 522305
- DIAG. OF CONNECTIONS PWR DISTRIBUTION CONTROL RACK RNO1B 470962
- DIAG. OF CONNECTIONS PWR DISTRIBUTION CONTROL RACK RNO3B 470970



LCV 110 STEAM GEN. 21 AUX. FEEDWATER SUPPLY
 STEAM GEN. AUX. FEEDWATER SUPPLY VALVES SIMILAR EXCEPT AS SHOWN IN TABLE

VALVE NO	DESCRIPTION	FW PUMP DISCH	VALVE LOC	120V INSTR. AC		CONTROLLER		ELECTRO-HYDRAULIC OPERATOR		CIRCUIT BREAKER		TRANSFER OF CONTROL ALARM	LOCAL CONTACTOR	AUX FW PUMP INTLK.	OUTPUT CKT. TO IND. @ H01 & CB	ERFDS		
				CKT. NO	LOC	DEVICE NO	INPUT CKT	OUTPUT CKTS	MODULATING SIGNAL CKT	NO	LOC							
LCV 110	STM GEN. 21 AUX. FW SUPPLY	22	XLCV110	325Y00	PY23	HIC 70	10086HC02D	10110LCV1, 2A	1020VACPWR	H69P00A	TFW1	52-2H-69	SPH	AY5064D	LJH69	52HH8	10110LCV2, 3	MUX07-15
LCV 111		22	XLCV111	325Y00	PY23	HIC 71	10087HC02D	10111LCV1, 2A	H69P00B	TFW1	52-2H-69	SPH	AY5064D		52HH8	10111LCV2, 3	MUX07-16	
LCV 115		23	XLCV115	IA22Y00	PY21A	HIC 72	10088HC02D	10115LCV1, 2A	F54P00A	TFW2	52-2F-54	SPF	AY5064D	LJF54	52HF9	10115LCV2, 3	MUX01-19	
LCV 113		24	XLCV113	IA22Y00	PY21A	HIC 73	10089HC02D	10113LCV1, 2A	F54P00B	TFW2	52-2F-54	SPF	AY5064D		52HF9	10113LCV2, 3	MUX01-20	

VALVE NO.	FAIL TO MANUAL AUX. RLY	PCS RLY OUTPUT	PCS RACK	FUSES	24VDC PWR SUPPLY	FTP	FUSES	SOFTWARE TAG	CHASSIS/SLOT/CHANNEL	SOFTWARE TAG	CHASSIS/SLOT/CHANNEL
LCV110	HC86X	CHC86FTM	RNO3B	TB8-FU1	RNO3B-PS24C/D	1S-6U	TB3-FU1/TB4-FU1	CHIC70AUTO	1S/56/C1	CHIC70MAN	1S/56/C2
LCV111	HC87X	CHC87FTM	RNO3B	TB8-FU2		2S-2U	TB3-FU2/TB4-FU2	CHIC71AUTO	2S/52/C1	CHIC71MAN	2S/52/C2
LCV115	HC88X	CHC88FTM	RNO1B	TB8-FU1		2S-2U	TB3-FU2/TB4-FU2	CHIC72AUTO	2S/52/C1	CHIC72MAN	2S/52/C2
LCV113	HC89X	CHC89FTM	RNO1B	TB8-FU2		1S-6U	TB3-FU1/TB4-FU1	CHIC73AUTO	1S/56/C1	CHIC73MAN	1S/56/C2

KEY DWG. SECTION 6

DATE: 06-14-2016
 D.O. P/NWB
 R.E. FxC2
 T.V. N/A
 P.E. N/A

REVISION DESCRIPTION
 REWISED PER DDN-2-1368

UNIT 2

ELECTRICAL SCHEMATIC DIAGRAM
 AUXILIARY FEEDWATER MOTOR OPERATED VALVES

DIAG. OF CONNECTIONS PWR DISTRIBUTION CONTROL RACK RNO1B
 SAN FRANCISCO, CALIFORNIA

DWG SCALES
 BILL OF MATL:
 SUPDS:
 SUPDS BY:
 DRAWING SHEET PAGE REV
 441301 1 0 22

RASTER=441301.dgn
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 User:PNWB Date: 06-14-2016