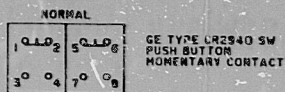
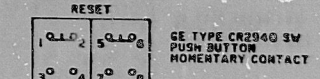
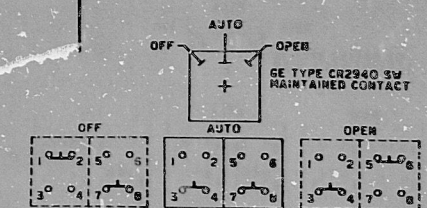


NUCLEAR SAFETY RELATED

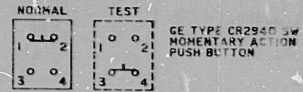
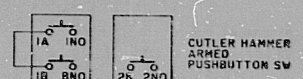
REVISION	NO.	DATE	BY	REASON
1	1			
2	2			
3	3			
4	4			
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6	6			
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8	8			
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11	11			
12	12			
13	13			
14	14			
15	15			
16	16			
17	17			
18	18			
19	19			
20	20			



SWITCH DESIG	CONT	SH NO.	SWITCH DESIG	CONT	SH NO.
SBA	1-2	16	S20A	1-2	16
	3-4	11		3-4	13
	5-6	11		5-6	13
	7-8	SP		7-8	SP
S9A	1-2	16	S21A	1-2	16
	3-4	11		3-4	11
	5-6	11		5-6	11
	7-8	SP		7-8	SP
S10A	1-2	16	S22A	1-2	16
	3-4	13		3-4	13
	5-6	13		5-6	13
	7-8	SP		7-8	SP
S11A	1-2	16	S23A	1-2	16
	3-4	13		3-4	13
	5-6	13		5-6	13
	7-8	SP		7-8	SP
S15A	1-2	16	S24A	1-2	16
	3-4	11		3-4	13
	5-6	11		5-6	13
	7-8	SP		7-8	SP
S17A	1-2	16	S25A	1-2	16
	3-4	13		3-4	13
	5-6	13		5-6	13
	7-8	SP		7-8	SP
S18A	1-2	16	S26A	1-2	16
	3-4	13		3-4	11
	5-6	13		5-6	13
	7-8	SP		7-8	SP
S19A	1-2	16	S27A	1-2	16
	3-4	11		3-4	13
	5-6	11		5-6	13
	7-8	SP		7-8	SP

SWITCH DESIG	CONT	SH NO.	SWITCH DESIG	CONT	SH NO.
S38A	1-2	5	S38B	1-2	5
	3-4	SP		3-4	SP
	5-6	5		5-6	5
	7-8	SP		7-8	SP

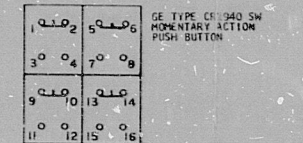
SWITCH DESIG	CONT	SH NO.	SWITCH DESIG	CONT	SH NO.
S12A	1-2	5	S12B	1-2	5
	3-4	SP		3-4	SP
	5-6	5		5-6	5
	7-8	SP		7-8	SP



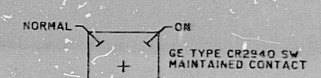
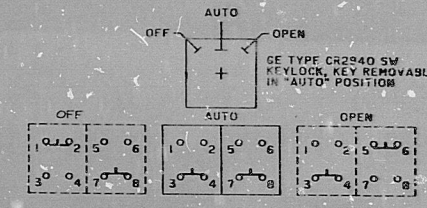
CONTACTS		COLLAR POSITION			
		DISARMED	ARMED		
		N	O	M	D
1A-INO		0	X	0	X
1B-BNO		0	X	X	X
2B-2NO		0	0	X	X

N = NORMAL
O = OPEN
X = CLOSED
D = DEPRESSURE

SWITCH DESIG	CONT	SH NO.	SWITCH DESIG	CONT	SH NO.
S36A	1-2	5	S36B	1-2	5
	3-4	SP		3-4	SP



SWITCH DESIG	CONT	SH NO.	SWITCH DESIG	CONT	SH NO.
S13A	1-2	5	S13B	1-2	5
	3-4	SP		3-4	SP
	5-6	5		5-6	5
	7-8	SP		7-8	SP
	9-10	5		9-10	5
	11-12	SP		11-12	SP
	13-14	5		13-14	5
	15-16	SP		15-16	SP



NOTES (CONT'D)
 18 ERS SIGNAL LOADINGS ON B211060 SYSTEM SHALL NOT EXCEED 0.05 VOLTS
 20 ALL ERS WIRING MUST MEET SEPARATION REQUIREMENTS DEFINED IN REFERENCES 4 & 6
 21 THESE SW COILS ARE CONTROLLED BY THE AE SUPPLIED REACTOR SHUTDOWN SYSTEM.

SWITCH DESIG	CONT	SH NO.	SWITCH DESIG	CONT	SH NO.
S8B	1-2	17	S20B	1-2	17
	3-4	12		3-4	14
	5-6	12		5-6	14
	7-8	SP		7-8	SP
S9B	1-2	17	S21B	1-2	17
	3-4	12		3-4	12
	5-6	12		5-6	12
	7-8	SP		7-8	SP
S10B	1-2	17	S22B	1-2	17
	3-4	14		3-4	14
	5-6	14		5-6	14
	7-8	SP		7-8	SP
S11B	1-2	17	S23B	1-2	17
	3-4	12		3-4	14
	5-6	12		5-6	14
	7-8	SP		7-8	SP
S15B	1-2	17	S24B	1-2	17
	3-4	12		3-4	14
	5-6	12		5-6	14
	7-8	SP		7-8	SP
S17B	1-2	17	S25B	1-2	17
	3-4	14		3-4	14
	5-6	14		5-6	14
	7-8	SP		7-8	SP
S18B	1-2	17	S26B	1-2	17
	3-4	14		3-4	12
	5-6	14		5-6	12
	7-8	SP		7-8	SP
S19B	1-2	17	S27B	1-2	17
	3-4	12		3-4	14
	5-6	12		5-6	14
	7-8	SP		7-8	SP

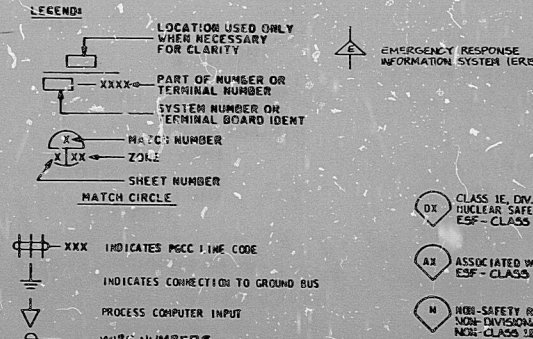
SWITCH DESIG	CONT	SH NO.	SWITCH DESIG	CONT	SH NO.
S37A	1-2	SP	S37B	1-2	SP
	3-4	15		3-4	15
	5-6	SP		5-6	SP
	7-8	16		7-8	17

SH NO.	CONTENTS
1	GENERAL INFORMATION & SWITCH TABULATIONS
2,3	RELAY, PUMP & VALVE TABULATIONS
4	POWER DISTRIBUTION & THERMOCOUPLE IDENTIFICATION
5	RELAY LOGIC
6	RELAY IDENTIFICATION
7-10	RELAY / ANALOG CIRCUITS
11,12	ADS VALVES
13,14	SAFETY / RELIEF VALVES
15	STATUS LIGHTS
16,17	ANNUNCIATORS
18,19	COMPUTER INPUTS
20	TERMINATION CABINET INTERFACE DEFINITION

- NOTES:
- UNLESS OTHERWISE NOTED, ALL DEVICE NUMBERS SHALL BE PREFIXED WITH B21C-
 - ALL THERMOCOUPLES ARE CHROMEL CONSTANTAN TYPE E, GROUNDED.
 - PINS "I", "J", AND "G" "H" ARE JUMPED IN TEST PLUG, REF 3.
 - SEE REF 6 FOR DEVICE AND WIRING SEPARATION REQUIREMENTS.
 - ALL VALVES HAVE TWO SOLENOID COILS "A" & "B".
 - UNLESS OTHERWISE NOTED, INDICATING LIGHTS ARE GE TYPE FT16 AND SUPPLIED WITH PANEL.
 - SEE REF 11 FOR REMOTE SHUTDOWN REQUIREMENTS.
 - LAMPS TO BE LOCATED BELOW ADS ANNUNCIATORS.
 - THESE LIGHTS ARE GE TYPE ET17 NEON WITH B1A BULB, 220 OHM RESISTOR AND CLEAR LENS CAP.
 - FOR LIGHTS SEE DWG 851603 LIGHTS ARE SUPPLIED WITH INTEGRAL TEST SWITCH
 - RELAYS TO USE LOCKING SPRINGS.
 - LOADS ARE STEADY STATE MAXIMUM LOADS.
 - SEE REF 8 FOR ISOLATOR POWER.
 - SEE REF 9 FOR ISOLATOR POWER.
 - THESE DEVICES MUST BE ENCLOSED IN METAL CANS IF REQUIRED BY DIVISIONAL ASSIGNMENT OF PANEL OR INSERT.
 - INDICATING LAMPS ON B1A-PE01 ARE PER 176A1633 (LA-1P) AND 175B9956 (HOLDER)
 - POWER MONITOR TO BE USED AT END OF LOGIC STRING.
 - TERMINATION CABINET INTERFACE DEFINITION IS SHOWN ON SHEET 20

REFERENCE DOCUMENTS:

- B21-1010 NUCLEAR BOILER PAID
- B21-1030 NUCLEAR BOILER FCD
- 13682524 TEST SWITCH ASSEMBLY
- A62-4010 SPECIAL WIRE & CABLE SPEC, REV 2
- IEEE278 NUCLEAR PLANTS PROTECTION SYSTEMS
- A62-4050 SEPARATION FOR PROTECTION SYSTEMS ELECTRICAL EQUIP
- B21-1010 NUCLEAR BOILER SYSTEM PAID DATA
- E12-1050 RESIDUAL HEAT REMOVAL SYS ELEM DIAG (E12A)
- E21-1050 LOW PRESS. CORE SPRAY SYS ELEM DIAG (E21)
- E51-1050 REAC CORE ISLR CLE SYSTEM ELEM DIAG (E51A)
- C61-1050 REMOTE SHUTDOWN SYSTEM ELEM DIAG (C61A)
- C95-1050 ERS ELEMENTARY DIAGRAM



NO.	DATE	BY	CHK BY	REVISION
9	10/11/77	A. GARCIA		REV 6 FDI
8	10/11/77	A. GARCIA		CHANGE FROM ANCR
7	10/11/77	A. GARCIA		CHANGE FROM ANCR
6	10/11/77	A. GARCIA		CHANGE FROM ANCR
5	10/11/77	A. GARCIA		CHANGE FROM ANCR
4	10/11/77	A. GARCIA		CHANGE FROM ANCR
3	10/11/77	A. GARCIA		CHANGE FROM ANCR
2	10/11/77	A. GARCIA		CHANGE FROM ANCR
1	10/11/77	A. GARCIA		CHANGE FROM ANCR

APERTURE CARD

8412200115

PDR RIDS

