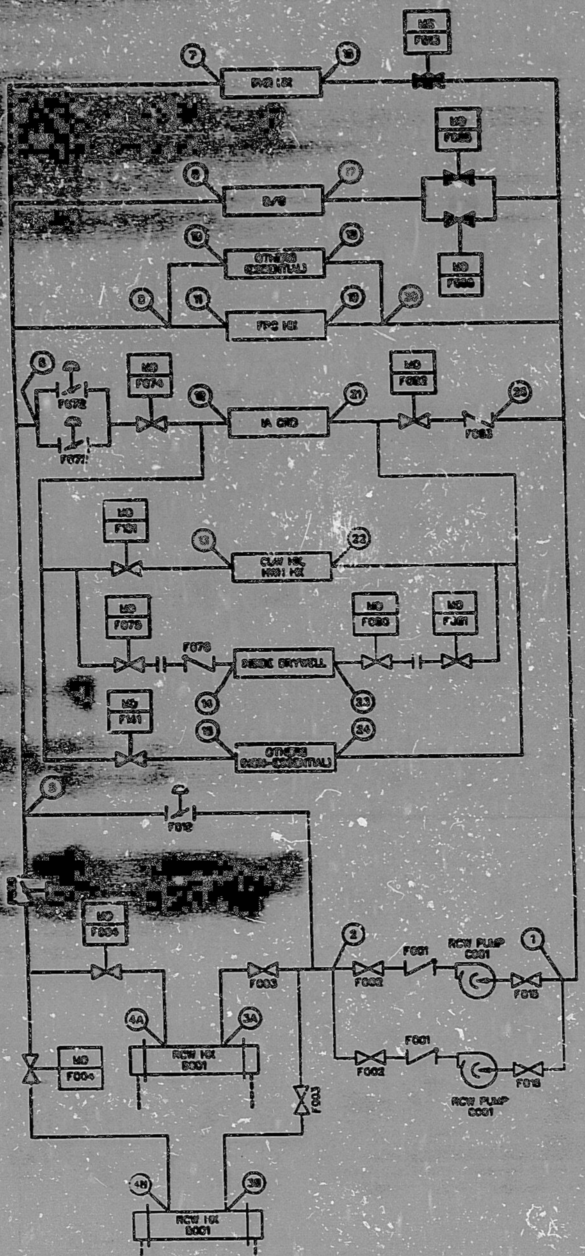


MODE A NORMAL OPERATING

POSITION		1	2	3A 3B	4A 4B	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
FLOW M^3/H	RCW (A), (B)	1129	1129	1129	1129	1129	604	—	—	525	245	280	40	160	295	100	—	—	245	280	525	40	160	295	100	604
	RCW (C)	726	726	726	726	726	675	—	—	51	51	/	40	/	/	635	—	—	51	/	51	40	/	/	635	675
PRESSURE Kg/cm^2 g	RCW (A), (B)	3.3	9.1	9.1	8.4	X	X	—	—	X	X	X	X	8.3	X	X	—	—	X	X	X	X	8.2	X	X	X
	RCW (C)	3.9	9.2	9.2	8.5	X	X	—	—	X	X	X	X	/	X	X	—	—	X	X	X	X	/	X	X	X
TEMPERATURE (°C)	RCW (A), (B)	43.4	43.4	43.4	35.0	35.0	35.0	—	—	35.0	35.0	35.0	35.0	35.0	35.0	35.0	—	—	39.0	40.9	40.8	40.3	65.1	38.9	38.4	48.3
	RCW (C)	47.9	47.9	47.9	35.0	35.0	35.0	—	—	35.0	35.0	/	35.0	/	/	35.0	—	—	35.0	/	35.0	39.7	/	/	49.4	49.8

MODE B REACTOR SHUTDOWN (AT 4 HOURS)

POSITION		1	2	3A 3B	4A 4B	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
FLOW M^3/H	RCW (A), (B)	2329	2329	1165	1165	2329	604	1200	—	525	245	280	49	160	295	100	1200	—	245	280	525	49	160	295	100	604
	RCW (C)	1926	1926	963	963	1926	675	1200	—	51	51	/	40	/	/	635	1200	—	51	/	51	40	/	/	635	675
PRESSURE Kg/cm^2 g	RCW (A), (B)	3.3	9.1	9.1	8.4	X	X	8.6	—	X	X	X	X	8.3	X	X	7.9	—	X	X	X	X	8.2	X	X	X
	RCW (C)	3.9	9.2	9.2	8.5	X	X	8.1	—	X	X	X	X	/	X	X	7.4	—	X	X	X	X	/	X	X	X
TEMPERATURE (°C)	RCW (A), (B)	48.1	48.1	48.1	35.0	35.0	35.0	35.0	—	35.0	35.0	35.0	35.0	35.0	35.0	35.0	56.5	—	38.5	40.9	40.2	40.3	35.0	38.9	38.4	38.4
	RCW (C)	53.3	53.3	53.3	35.0	35.0	35.0	35.0	—	35.0	35.0	/	35.0	/	/	35.0	56.5	—	37.3	/	37.3	39.7	/	/	49.4	48.8

MODE C REACTOR SHUTDOWN (AT 20 HOURS)

POSITION		1	2	3A 3B	4A 4B	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
FLOW M^3/H	RCW (A), (B)	2329	2329	1165	1165	2329	604	1200	—	525	245	280	49	160	295	100	1200	—	245	280	525	49	160	295	100	604
	RCW (C)	1926	1926	963	963	1926	675	1200	—	51	51	/	40	/	/	635	1200	—	51	/	51	40	/	/	635	675
PRESSURE Kg/cm^2 g	RCW (A), (B)	3.3	9.1	9.1	8.4	X	X	8.6	—	X	X	X	X	8.3	X	X	7.9	—	X	X	X	X	8.2	X	X	X
	RCW (C)	3.9	9.2	9.2	8.5	X	X	8.1	—	X	X	X	X	/	X	X	7.4	—	X	X	X	X	/	X	X	X
TEMPERATURE (°C)	RCW (A), (B)	34.1	34.1	34.1	28.5	28.5	28.5	28.5	—	28.5	28.5	28.5	28.5	28.5	28.5	28.5	35.4	—	33.0	34.4	33.7	33.8	28.5	33.4	31.9	31.9
	RCW (C)	37.7	37.7	37.7	28.5	28.5	28.5	28.5	—	28.5	28.5	/	28.5	/	/	28.5	35.4	—	30.8	/	30.8	33.2	/	/	42.9	42.3

MODE D HOT STAND-BY

POSITION		1	2	3A 3B	4A 4B	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
FLOW M^3/H	RCW (A), (B)	1129	1129	1129	1129	1129	604	—	—	525	245	280	49	160	295	100	—	—	245	280	525	49	160	295	100	604
	RCW (C)	726	726	726	726	726	675	—	—	51	51	/	40	/	/	635	—	—	51	/	51	40	/	/	635	675
PRESSURE Kg/cm^2 g	RCW (A), (B)	3.3	9.1	9.1	8.4	X	X	—	—	X	X	X	X	8.3	X	X	—	—	X	X	X	X	8.2	X	X	X
	RCW (C)	3.9	9.2	9.2	8.5	X	X	—	—	X	X	X	X	/	X	X	—	—	X	X	X	X	/	X	X	X
TEMPERATURE (°C)	RCW (A), (B)	43.4	43.4	43.4	35.0	35.0	35.0	—	—	35.0	35.0	35.0	35.0	35.0	35.0	35.0	—	—	39.1	40.9	40.1	40.3	65.1	39.9	38.4	48.3
	RCW (C)	47.9	47.9	47.9	35.0	35.0	35.0	—	—	35.0	35.0	/	35.0	/	35.0	35.0	—	—	35.0	/	35.0	39.7	/	/	49.4	49.8

MODE E HOT STAND-BY (LOSS OF AC)

POSITION		1	2	3A 3B	4A 4B	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
FLOW M^3/H	RCW (A), (B)	2459	2459	1230	1230	2459	504	1200	230	525	245	280	49	160	295	—	1200	230	245	280	525	49	160	295	—	504
	RCW (C)	1521	1521	761	761	1521	40	1200	230	51	51	/	40	/	60	—	1200	230	51	/	51	40	/	/	—	40
PRESSURE Kg/cm^2 g	RCW (A), (B)	3.3	9.1	9.1	8.4	X	X	8.6	X	X	X	X	X	8.3	X	—	7.9	X	X	X	X	X	8.2	X	—	X
	RCW (C)	3.9	9.2	9.2	8.5	X	X	8.1	X	X	X	X	X	/	X	—	7.4	X	X	X	X	X	/	X	—	X
TEMPERATURE (°C)	RCW (A), (B)	42.1	42.1	42.1	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	—	39.8	48.7	39.8	40.9	40.4	38.8	65.1	37.7	—	48.5
	RCW (C)	41.0	41.0	41.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	/	35.0	/	/	—	39.8	48.7	37.3	/	37.3	37.8	/	/	—	37.9

MODE F SUPPRESSION POOL COOLING (LOCA S/P 97 °C)

POSITION		1	2	3A 3B	4A 4B	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
FLOW M^3/H	RCW (A), (B)	2004	2004	1002	1002	2004	49	1200	230	525	245	280	49	—	—	—	1200	230	245	280	525	49	—	—	—	49
	RCW (C)	1521	1521	761	761	1521	40	1200	230	51	51	/	40	/	/	—	1200	230	51	/	51	40	/	/	—	40
PRESSURE Kg/cm^2 g	RCW (A), (B)	3.3	9.1	9.1	8.4	X	X	8.6	X	X	X	X	X	—	—	—	7.9	X	X	X	X	X	—	—	—	X
	RCW (C)	3.9	9.2	9.2	8.5	X	X	8.1	X	X	X	X	X	/	/	—	7.4	X	X	X	X	X	/	/	—	X
TEMPERATURE (°C)	RCW (A), (B)	49.2	49.2	48.2	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	—	—	—	53.0	48.7	39.9	43.1	41.6	38.5	—	—	—	38.5
	RCW (C)	51.6	51.6	51.6	35.0	35.0	35.0	35.0	35.0	35.0	35.0	/	35.0	/	/	—	53.0	48.7	40.4	/	40.4	39.3	/	/	—	39.3

MODE G SUPPRESSION POOL COOLING (LOCA S/P 52 °C)

POSITION		1	2	3A 3B	4A 4B	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
FLOW M^3/H	RCW (A), (B)	2004	2004	1002	1002	2004	49	1200	230	525	245	280	49	—	—	—	1200	230	245	280	525	49	—	—	—	49
	RCW (C)	1521	1521	761	761	1521	40	1200	230	51	51	/	40	/	/	—	1200	230	51	/	51	40	/	/	—	40
PRESSURE Kg/cm^2 g	RCW (A), (B)	3.3	9.1	9.1	8.4	X	X	8.6	X	X	X	X	X	—	—	—	7.9	X	X	X	X	X	—	—	—	X
	RCW (C)	3.9	9.2	9.2	8.5	X	X	8.1	X	X	X	X	X	/	/	—	7.4	X	X	X	X	X	/	/	—	X
TEMPERATURE (°C)	RCW (A), (B)	39.7	39.7	39.7	32.8	32.6	32.6	32.6	32.6	32.6	32.6	32.6	32.8	—	—	—	38.7	48.3	37.3	40.7	39.2	36.1	—	—	—	36.1
	RCW (C)	39.8	39.8	39.8	32.6	32.6	32.6	32.6	32.6	32.6	32.6	/	32.6	/	/	—	38.7	48.3	38.0	/	38.0	36.9	/	/	—	35.9

TABLE 1 RCW VALVE POSITION CHART

	F006	F010	F012	F055	F072	F074	F075	F080	F081	F082	F101	F141
MODE A	O-T	C-T	C	C	O	O	O	O	O	O	O	O
MODE B	O-T	C-T	O-T	C	O	O	O	O	O	O	O	O
MODE C	O-T	C-T	O	C	O	O	O	O	O	O	O	O
MODE D	O-T	C-T	C	C	O	O	O	O	O	O	O	O
MODE E	O-T	C-T	O-T	O	O	O	O	O	O	O	O	C
MODE F	O	C	O	O	O	O	C	C	C	O	C	C
MODE G	O	C	O	O	O	O	C	C	C	O	C	C

O = VALVE OPEN
T = VALVE THROTTLED
C-T = VALVE CLOSED OR THROTTLED
O-T = VALVE OPEN OR THROTTLED
C = VALVE CLOSED

NOTES:

1. [X] — INDICATES THE DATA IS NOT SIGNIFICANT.
   [—] — INDICATES THE DATA FLOW EQUALS ZERO.
   [/] — INDICATES THE DATA IS NOT IN THIS SYSTEM.
2. ALLOWABLE ... AN HEAD LOSS VALUES FOR EQUIPMENT SHALL BE 7mAq AND LESS.
3. TABLE 1 INDICATES VALVE POSITIONS DURING EACH OPERATING MODE.
4. THE VALUES OF RCW (A) AND RCW (B) ARE TYPICAL TO THE VALUES OF RCW (A).
5. PIPING SYSTEM DESIGN PRESSURE AND TEMPERATURE ARE AS FOLLOWS:

SYSTEM	DESIGN PRESSURE Kg/cm^2 (G)	DESIGN TEMPERATURE (°C)
RCW	14.0	70

6. RCW PUMP FLOW AND HEAD ARE AS FOLLOWS:

SYSTEM	PUMP FLOW (m^3/h)	PUMP HEAD (mAq)
RCW (A), (B)	1250	28
RCW (C)	700	33

REFERENCE DOCUMENTS: MPL NO.

1. REAC BLDG COOLING WATER SYS P&ID P21-1010

FIG. 9.2-1aa

MPL NO. P21-1020

SI APERTURE CARD

SIGNATURES: WB TORRES, FE WILHELM, GA PAYLIS, GE MILLER

APPLIED PRACTICES

UNLESS OTHERWISE SPECIFIED TOLERANCES ON: 2 PLACE DECIMALS ± 3 PLACE DECIMALS ± FRACTIONS ± ANGLES ±

SAFETY RELATED — THIS ITEM IS OR CONTAINS A SAFETY RELATED ITEM

Nuclear Energy — GENERAL ELECTRIC COMPANY San Jose CA

DOC TYPE: PFD
REACTOR BUILDING COOLING WATER SYSTEM

9-26-91

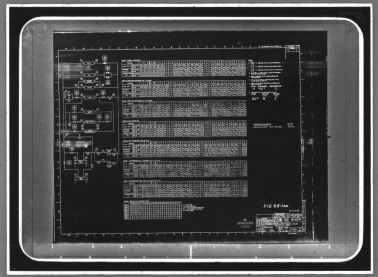
107E6004 — REV 0

AP-8078680

107E6004

PDR RIDS

9202250349



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