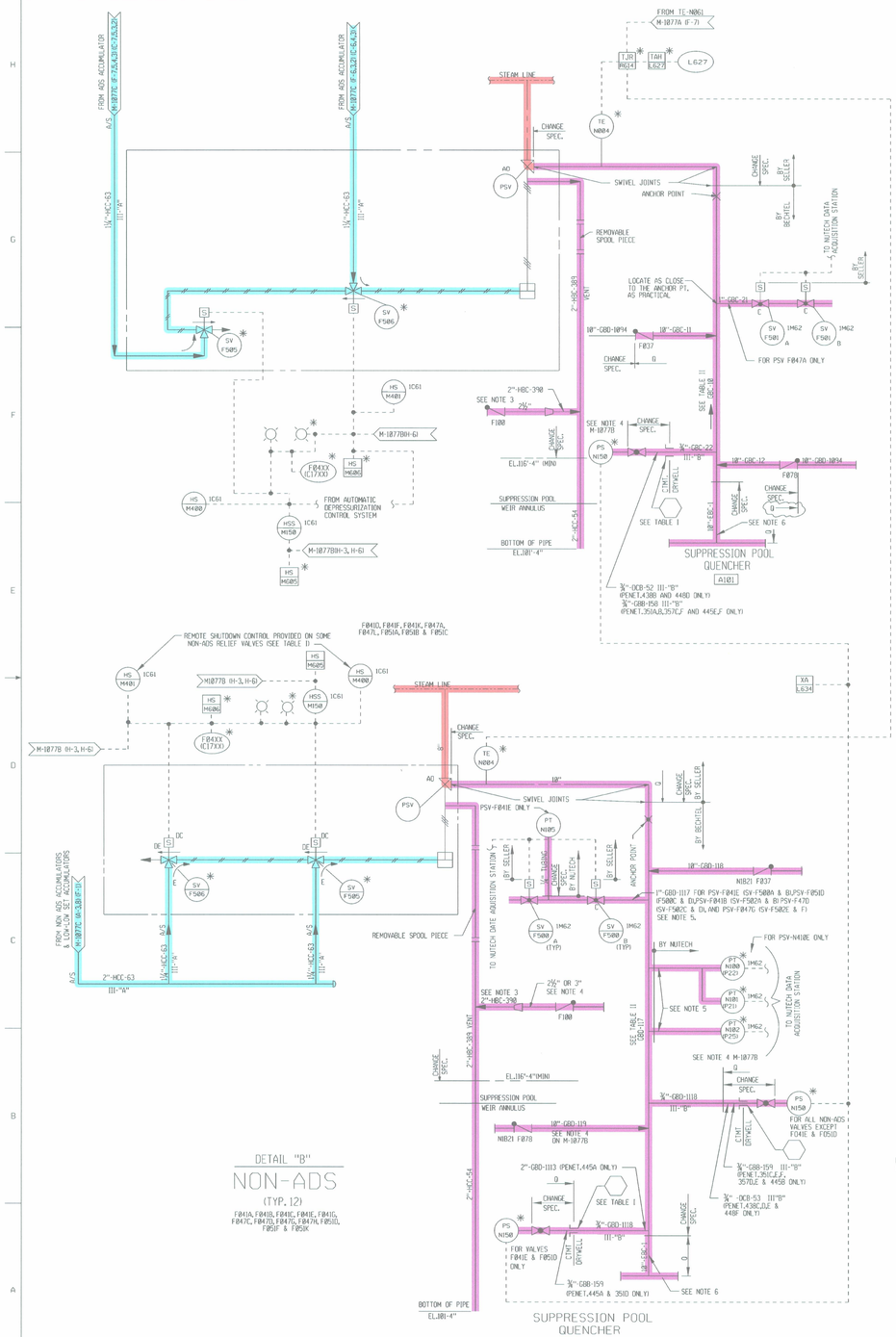
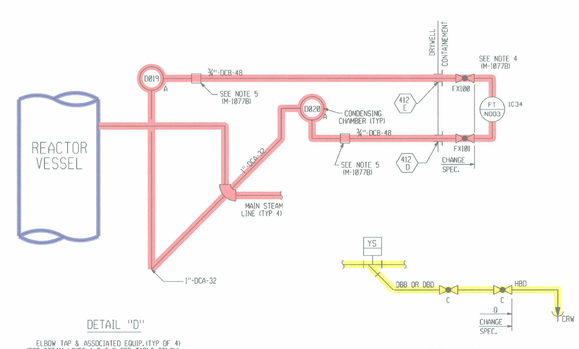
MPL No. 1B21 1015 | M-1077E

TABLE I SAFETY/RELIEF VALVES & ASSOCIATED EQUIPMENT SUFFIX LETTER ASSIGNMENTS

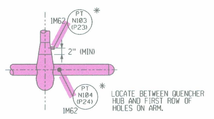
SAFETY/RELIEF VALVES		F041A	F041B	F041C	F041D	F041E	F041F	F041G	F041X	F047A	F047C	F047D	F047C	F047N	F051B	F051C	F051D	F051F	F051X
PRESSURE SWITCH FX VALVE AND PENETRATION	PS N150	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	W
	FX VALVES	133	121	142	136	131	123	135	124	132	141	126	139	137	134	130	120	140	138	122	125
	PENETRATION	445B	357D	438E	351B	445A	375F	448F	351A	445F	438D	351E	438C	351C	448D	445E	357C	348B	351D	357E	351F
PRESSURE INDICATING SWITCH	N668	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A, B, E	-	-
PRESSURE SWITCH	N669	-	-	-	-	-	-	-	-	B	B	B	B	B	B	B	B	-	-	B	B
	N670	A, B	A, B	A, B	A, B	A, B	A, B	A, B	A, B	-	-	-	-	-	-	-	-	A, B	-	-	-
	N616	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E	-	-
	N617	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	N618	-	-	-	-	-	-	-	-	A, B	A, B	A, B	A, B	A, B	A, B	A, B	A, B	-	-	B	B
TEMPERATURE ELEMENT	N004	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	W
COMPUTER INPUT,VALVE ACTUATED		F041A K17J3	F041B K17J4	F041C K17J5	F041D K17J6	F041E K17J7	F041F K17J8	F041G K17J9	F041X K17H8	F047A K17H9	F047C K17H0	F047D K17H1	F047C K17H2	F047N K17H3	F051A K17H4	F051B K17H5	F051C K17H6	F051D K17H7	F051F K17G8	F051X K17G9	
SOLENOID VALVES	SV F505	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	W
	SV F506	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	W
HANDSWITCH	HSS M150 (DIV. I ONLY) * APPLICABLE	-	-	-	-	-	-	-	-	-	*	*	-	-	*	-	*	-	*	*	-
	HS M605	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	W
	HS M606	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	W
VACUUM BREAKER F100		A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	W
VACUUM BREAKER F078 & F037		P	B	W	H	M	D	S	F	L	V	G	T	J	R	N	A	U	K	C	E
REMOTE SHUTDOWN SWITCH HS M400 & M401		-	-	-	-	-	-	-	-	-	-	E	F	-	-	B	C	-	D	G	-

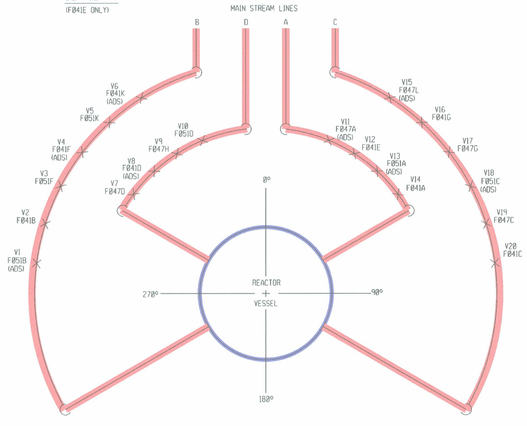




STEAM LINE	CONDENSING CHAMBERS	TRANSMITTER	PENETRATION	ROOT VALVES
A	D019A	D020A	IC34 FT N003A	412E	412D	FX100	FX101
B	D019B	D020B	IC34 FT N003B	458C	458D	FX102	FX103
C	D019C	D020C	IC34 FT N003C	426A	426F	FX104	FX105
D	D019D	D020D	IC34 FT N003D	413B	413A	FX098	FX099

STRAINER NO.	VALVE NO.	LINE NO.	COND. NO.
YS-0016	F105 (119) F106 (120)	½"-HBD-71 & ½"-HBD-929	M-1077A (E-3)
YS-0017	F111 (131) F112 (132)	½"-DBD-79 & ½"-HBD-935	M-1077A (E-4)





SAFETY/RELIEF VALVE ORIENTATION

TABLE II RELIEF DISCHARGE LINES SIZE TABULATION

VALVE NUMBER	10"-GBD-117/ 10"-GBC-10	12"-GBD-117/ 12"-GBC-10	14"-GBD-117/ 14"-GBC-10	16"-GBD-117/ 16"-GBC-10
V1 *	✓	✓	N/A	N/A
V2	✓	✓	N/A	N/A
V3	✓	N/A	✓	N/A
V4 *	✓	✓	✓	N/A
V5	✓	✓	✓	N/A
V6 *	✓	✓	✓	N/A
V7	✓	N/A	✓	N/A
V8 *	✓	✓	N/A	✓
V9	✓	✓	N/A	✓
V10	✓	N/A	✓	✓
V11 *	✓	N/A	✓	N/A
V12	✓	N/A	✓	N/A
V13 *	✓	N/A	✓	N/A
V14	✓	✓	✓	N/A
V15 *	✓	✓	✓	N/A
V16	✓	✓	N/A	N/A
V17	✓	✓	✓	N/A
V18 *	✓	✓	✓	✓
V19	✓	✓	N/A	N/A
V20	✓	✓	N/A	N/A

* INDICATES ADS VALVES. THE PIPE CLASSIFICATION AND LINE NUMBER FOR ADS VALVES WOULD BE GBC-1A.

✓ INDICATES THAT IT FORMS PART OF THE SAFETY RELIEF VALVE DISCHARGE LINE.

NOTES:

1. FOR ADDITIONAL NOTES SEE DRAWING M-1077A.
2. ALL PIPING 2" AND SMALLER IS CLASSIFIED AS 1-"E" RADIATION LEVEL UNLESS NOTED OTHERWISE.
3. LOCATE EACH BONNET VENT LINE VACUUM BREAKER AS CLOSE AS POSSIBLE TO THE VENT LINE AND THE SAFTEY RELIEF VALVE.
4. VALVES F108A,B, AND C ARE 3 INCHES IN SIZE AND THE REMOVING VACUUM BREAKERS ARE 2½ INCHES IN SIZE.
5. CONNECTIONS SHALL BE INSTALLED IN THE HORIZONTAL PLANE.
6. PIPING FROM INSIDE DRYWELL PENETRATION TO SPARGER SHALL BE 10"-EBC.

COMPONENTS SUBJECT TO AMR

- REACTOR PRESSURE VESSEL AMM01
- REACTOR COOLANT SYSTEM PRESSURE BOUNDARY AMM03
- PRESSURE RELIEF SYSTEM AMM08
- NON-SAFETY RELATED SYSTEMS & COMPONENTS AFFECTING SAFETY RELATED SYSTEMS AMM20
- COMPRESSED AIR SYSTEMS AMM27

NO	DATE	DESCRIPTION	BY	ENG	CHK	APP
003	AS-BUILT PER EC 26877	WC	N/A	N/A	SIP	CW	1-21 -11
002	AS-BUILT PER SWO TO CORRECT UFSAR FIGURE NUMBER	GHE	N/A	N/A	SIP	SIP	1-24 -/00
001	AS-BUILT PER DRN 6181	GHE	N/A	N/A	WC	WC	11-18 -98

GRAND GULF NUCLEAR STATION
UNIT 1
NUCLEAR PLANT ENGINEERING

UPDATED FINAL SAFETY ANALYSIS REPORT
FIGURE NUMBER – 05.2-008-02

P&I DIAGRAM
NUCLEAR BOILER SYSTEM

SCALE:	DRAWING NO.	REV.
NONE	M-1077E	003

MPL No. 1B21 1015

DFN: m1077e.dgn

NO	DATE	DESCRIPTION	BY	ENG	CHK	APP
0	10-11-2011					

REVISIONS

LRA-M-1077E

CAD FILE m1077e.DGN

MASTER FILE

2011