

Figure 7.3-4 – Residual Heat Removal System IBD (Sheet 20a of 20)

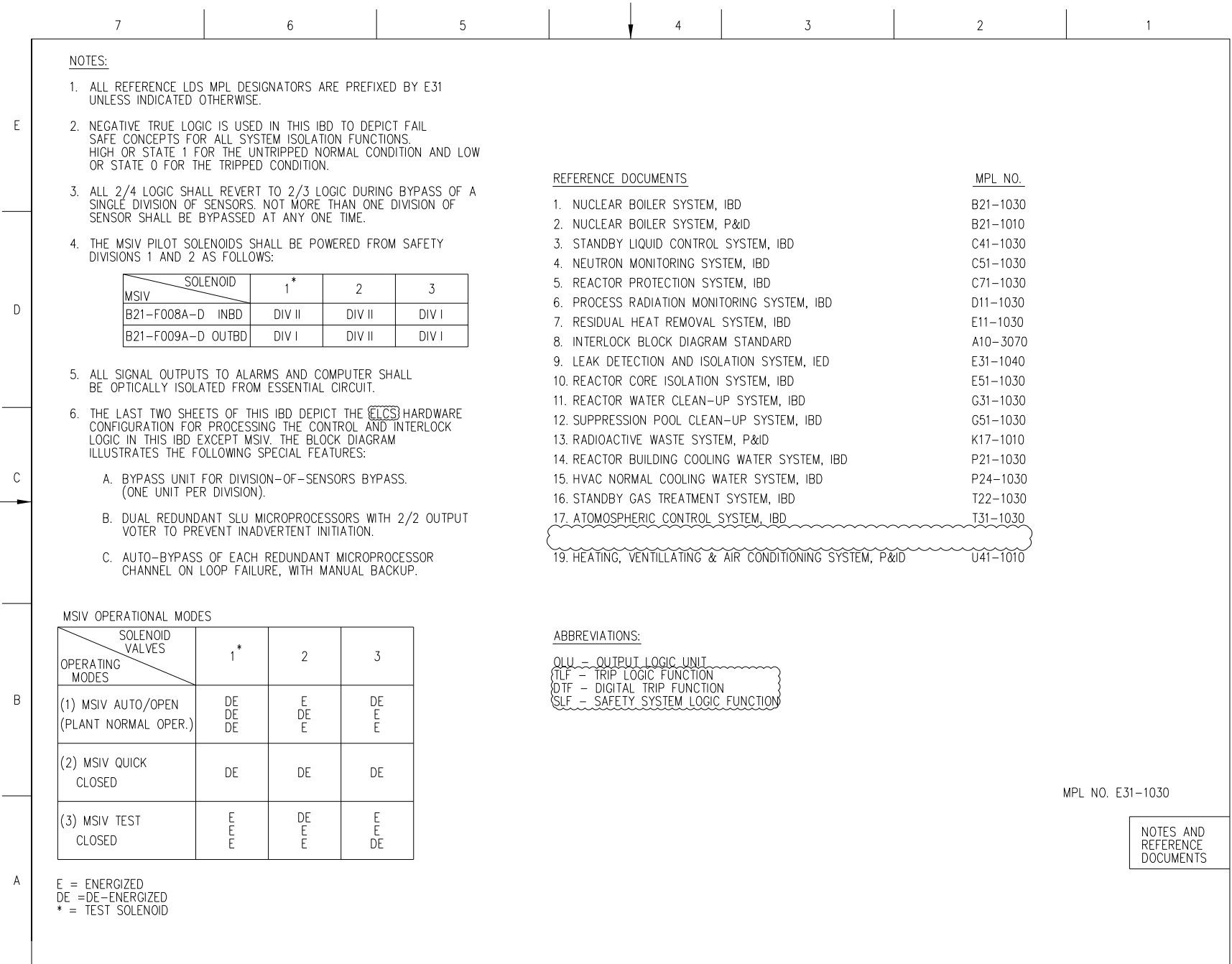


Figure 7.3-5 – Leak Detection and Isolation System IBD (Sheet 1 of 77)

		7   6   5   4   3   2   1								
		TABLE OF CONTENTS								
E	D	C	B	A	SH NO.	TITLE	SH NO.	TITLE	SH NO.	TITLE
					1	NOTES & REFERENCE DOCUMENTS	31	MSL C OUTBOARD MSIV CONTROL LOGIC	61	CUW VALVE ROOM TEMP TRIP LOGIC
					2	CONTENTS	32	MSL D OUTBOARD MSIV CONTROL LOGIC	62	CUW INBOARD VALVE ISOLATION LOGIC
					3	INDEX OF ALARMS	33	MANUAL & AUTO MSL ISOLATION LOGIC – DIV 1	63	CUW OUTBOARD VALVE ISOLATION LOGIC
					4	MSIV SENSORS & TRIP LOGIC – DIV 1	34	MANUAL & AUTO MSL ISOLATION LOGIC – DIV 2	64	CUW INJECTION & PURGE LINE VALVES ISOLATION LOGIC
					5	MSIV SENSORS & TRIP LOGIC – DIV 2	35	MANUAL & AUTO MSL ISOLATION LOGIC – DIV 3	65	CUW HEAD SPRAY VALVE ISOLATION LOGIC
					6	MSIV SENSORS & TRIP LOGIC – DIV 3	36	MANUAL & AUTO MSL ISOLATION LOGIC – DIV 4	66	DRYWELL FISSION PRODUCTS SAMPLING PUMPS
					7	MSIV SENSORS & TRIP LOGIC – DIV 4	37	INBOARD MSIV CONTROL LOGIC	67	DRYWELL FISSION PRODUCTS ISOLATION VALVES
					8	MSIV VOTING & CHANNEL BYPASS LOGIC – DIV 1	38	OUTBOARD MSIV CONTROL LOGIC	68	DRYWELL FISSION PRODUCTS MISC CIRCUIT LOGIC
					9	MSIV VOTING & CHANNEL BYPASS LOGIC – DIV 1	39	ANNUNCIATORS – MSIV TRIP INDICATION	69	SPCU ISOLATION LOGIC
					10	MSIV VOTING & CHANNEL BYPASS LOGIC – DIV 1	40	ANNUNCIATORS – MSIV TRIPPED IN BYPASS CHANNEL	70	DW LCW & HCW SUMP DRAIN LINES ISOLATION LOGIC
					11	MSIV AUTO ISOLATION TRIP LOGIC – DIV 1	41	LDS SENSORS & TRIP LOGIC – DIV 1	71	RCW/HNCW PCV VALVES ISOLATION LOGIC
					12	MSIV VOTING & CHANNEL BYPASS LOGIC – DIV 2	42	LDS SENSORS & TRIP LOGIC – DIV 2	72	AC SYSTEM & R/B HVAC ISOLATION LOGIC
					13	MSIV VOTING & CHANNEL BYPASS LOGIC – DIV 2	43	LDS SENSORS & TRIP LOGIC – DIV 3	73	SGTS INITIATION LOGIC
14	MSIV VOTING & CHANNEL BYPASS LOGIC – DIV 2	44	LDS SENSORS & TRIP LOGIC – DIV 4							
15	MSIV AUTO ISOLATION TRIP LOGIC – DIV 2	45	LDS VOTING & BYPASS LOGIC – DIV 1	75	MISC LOGIC & ANNUNCIATORS					
16	MSIV VOTING & CHANNEL BYPASS LOGIC – DIV 3	46	LDS VOTING & BYPASS LOGIC – DIV 2	76	ELCS/ECCS/LDS BLOCK DIAGRAM					
17	MSIV VOTING & CHANNEL BYPASS LOGIC – DIV 3	47	LDS VOTING & BYPASS LOGIC – DIV 3	77	ELCS/ECCS/LDS BLOCK DIAGRAM (CONT'D)					
18	MSIV VOTING & CHANNEL BYPASS LOGIC – DIV 3	48	RHR AREA A TEMP TRIP LOGIC							
19	MSIV AUTO ISOLATION TRIP LOGIC – DIV 3	49	RHR AREA B TEMP TRIP LOGIC							
20	MSIV VOTING & CHANNEL BYPASS LOGIC – DIV 4	50	RHR AREA C TEMP TRIP LOGIC							
21	MSIV VOTING & CHANNEL BYPASS LOGIC – DIV 4	51	RHR LOOP A ISOLATION LOGIC							
22	MSIV VOTING & CHANNEL BYPASS LOGIC – DIV 4	52	RHR LOOP B ISOLATION LOGIC							
23	MSIV AUTO ISOLATION TRIP LOGIC – DIV 4	53	RHR LOOP C ISOLATION LOGIC							
24	MSIV POSITION SENSORS LOGIC	54	RCIC AREA TEMP TRIP LOGIC							
25	MSL A INBOARD MSIV CONTROL LOGIC	55	RCIC LOW SL PRESSURE TRIP LOGIC							
26	MSL B INBOARD MSIV CONTROL LOGIC	56	RCIC HIGH SL FLOW TRIP LOGIC							
27	MSL C INBOARD MSIV CONTROL LOGIC	57	RCIC ISOLATION LOGIC							
28	MSL D INBOARD MSIV CONTROL LOGIC	58	CUW MASS DIFF FLOW TRIP LOGIC							
29	MSL A OUTBOARD MSIV CONTROL LOGIC	59	CUW REG HX TEMP TRIP LOGIC							
30	MSL B OUTBOARD MSIV CONTROL LOGIC	60	CUW NON-REG HX TEMP TRIP LOGIC							
					CONTENTS					

Figure 7.3-5 – Leak Detection and Isolation System IBD (Sheet 2 of 77)

		E31/LDS ANNUNCIATOR LIST							
		7	6	5	4	3	2	1	
E									
		ITM. NO.	ALARM FUNCTION	SH NO.	ITM. NO.	ALARM FUNCTION	SH NO.		
		1	MSL AUTO TRIP - ONE PER LOGIC DIVISION	33-36	27	CUW REGEN HX AREA TEMP HIGH	59		
		2	MSL MANUAL TRIP - ONE PER LOGIC DIVISION	33-36	28	CUW NON-REGEN HX AREA TEMP HIGH	60		
		3	MSL TUNNEL TEMP HIGH - ONE COMMON TO FOUR DIVISIONS	39	29	CUW VALVE ROOM TEMP HIGH	61		
		4	MSL TURBINE AREA AMBIENT TEMP HIGH - SAME AS 3 ABOVE	39	30	CUW INBOARD VALVE ISOLATED	62		
				39	31	CUW OUTBOARD VALVE ISOLATED	63		
D		6	REACTOR WATER LEVEL LOW - SAME AS 3 ABOVE	39	32	CUW INJECTION VALVE ISOLATED	64		
		7	MSL A STEAM FLOW HIGH - SAME AS 3 ABOVE	39	33	CUW HEAD SPRAY VALVE ISOLATED	65		
		8	MSL B STEAM FLOW HIGH - SAME AS 3 ABOVE	39	34	DW INBOARD PCV VALVES ISOLATED	67		
		9	MSL C STEAM FLOW HIGH - SAME AS 3 ABOVE	39	35	DW OUTBOARD PCV VALVES ISOLATED	67		
		10	MSL D STEAM FLOW HIGH - SAME AS 3 ABOVE	39	36	DW FISSION PRODUCT SAMPLING SYSTEM ABNORMAL	68		
		11	MAIN CONDENSER VACUUM LOW - SAME AS 3 ABOVE	39	37	SPCU ISOLATED	69		
		12	MSL PRESSURE LOW - SAM AS 3 ABOVE	39	38	DRYWELL LCW DRAIN LINE ISOLATED	70		
		13	TRIPPED MSIV VARIABLE IN BYPASSED CHANNEL A	40	39	DRYWELL HCW DRAIN LINE ISOLATED	70		
C		14	TRIPPED MSIV VARIABLE IN BYPASSED CHANNEL B	40	40	RCW/HNCW PCV VALVES ISOLATED	71		
		15	TRIPPED MSIV VARIABLE IN BYPASSED CHANNEL C	40	41	AC SYSTEM/HVAC ISOLATED	72		
		16	TRIPPED MSIV VARIABLE IN BYPASSED CHANNEL D	40	42	SGTS INITIATED ONE EACH PER TRAINS B & C	73		
		17	RHR EQUIPMENT AREA A TEMP HIGH	48	43	FC SYSTEM ISOLATED ONE EACH PER TRAINS B & C	74		
		18	RHR EQUIPMENT AREA B TEMP HIGH	49	44	MONITORED AREA DIFF TEMP HIGH	75		
		19	RHR EQUIPMENT AREA C TEMP HIGH	50	45	DRYWELL AREA TEMP HIGH - ONE COMMON TO FOUR DIVISIONS	75		
		20	RHR ISOLATED - LOOP A	51	46	CUW MASS DIFF FLOW HIGH	75		
		21	RHR ISOLATED - LOOP B	52	47	CUW MASS DIFF FLOW HIGH WARNING	75		
		22	RHR ISOLATED - LOOP C	53	48	DRYWELL AIR COOLER CONDENSATE FLOW HIGH	75		
		23	RCIC EQUIPMENT AREA TEMP HIGH	54			75		
B		24	RCIC STEAMLINE PRESSURE LOW	55	50	DRYWELL DRAIN SUMPS WATER LEVEL HIGH	75		
		25	RCIC STEAMLINE FLOW HIGH	56					
		26	RCIC ISOLATED	57					
A									

Figure 7.3-5 – Leak Detection and Isolation System IBD (Sheet 3 of 77)

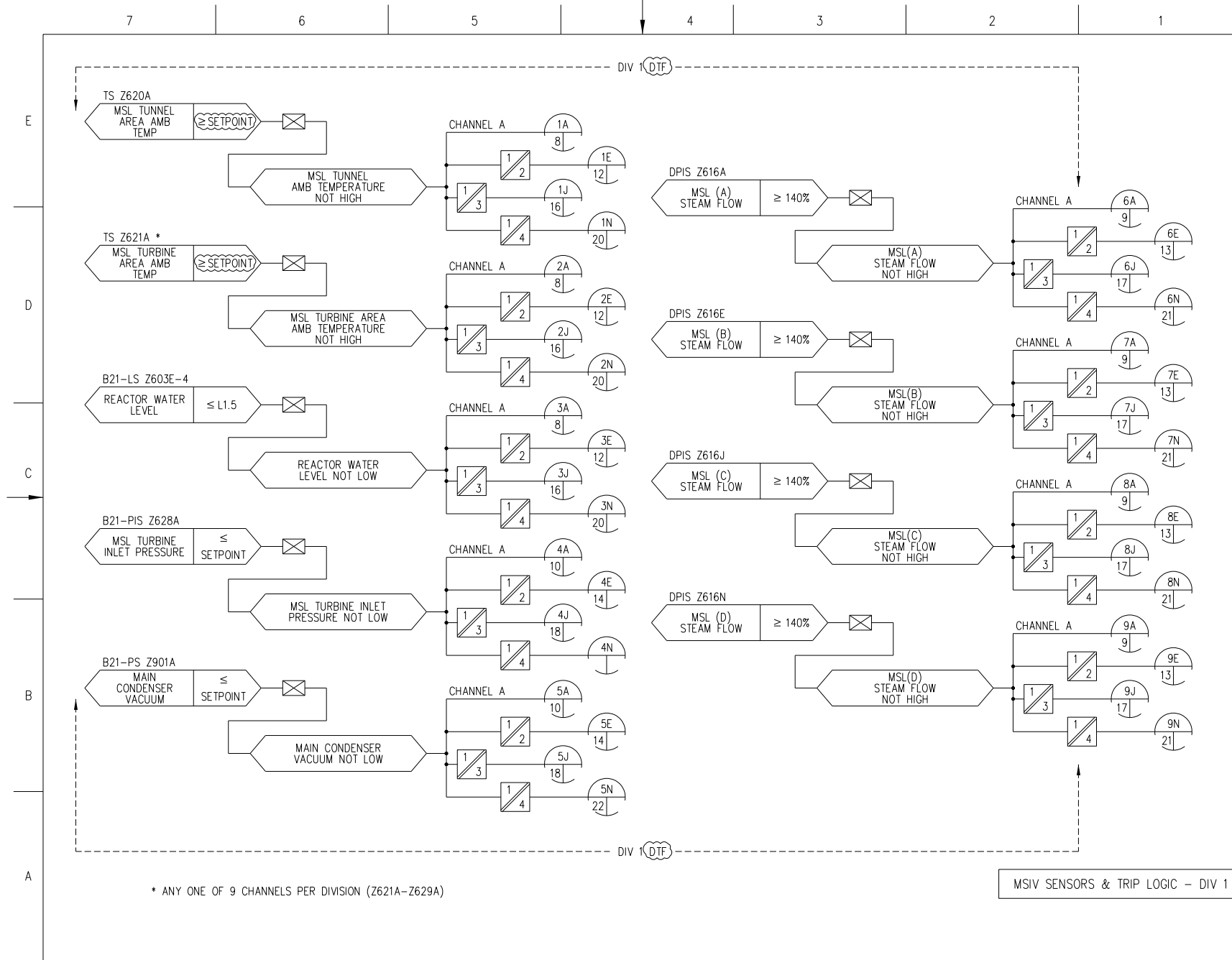


Figure 7.3-5 – Leak Detection and Isolation System IBD (Sheet 4 of 77)

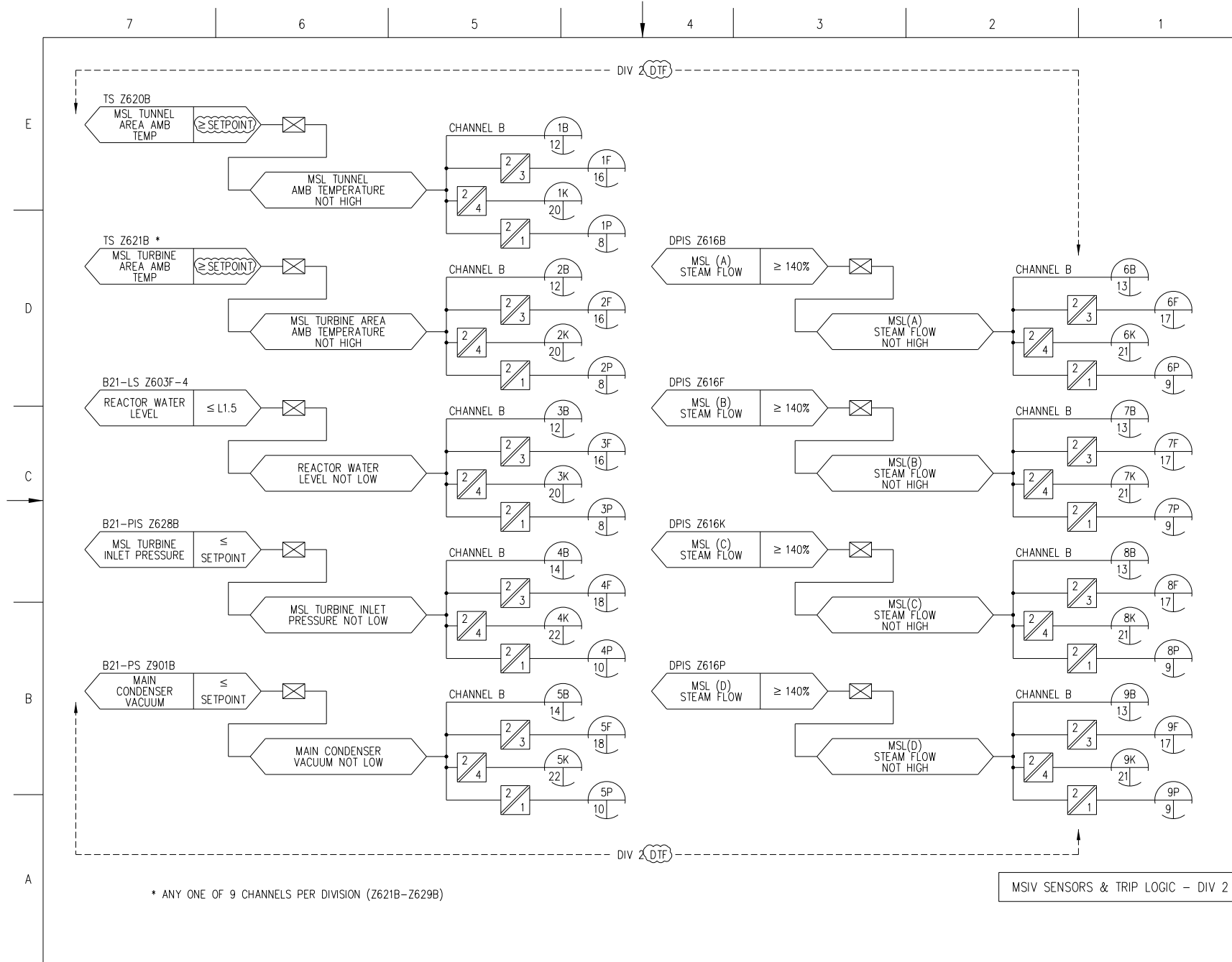


Figure 7.3-5 – Leak Detection and Isolation System IBD (Sheet 5 of 77)

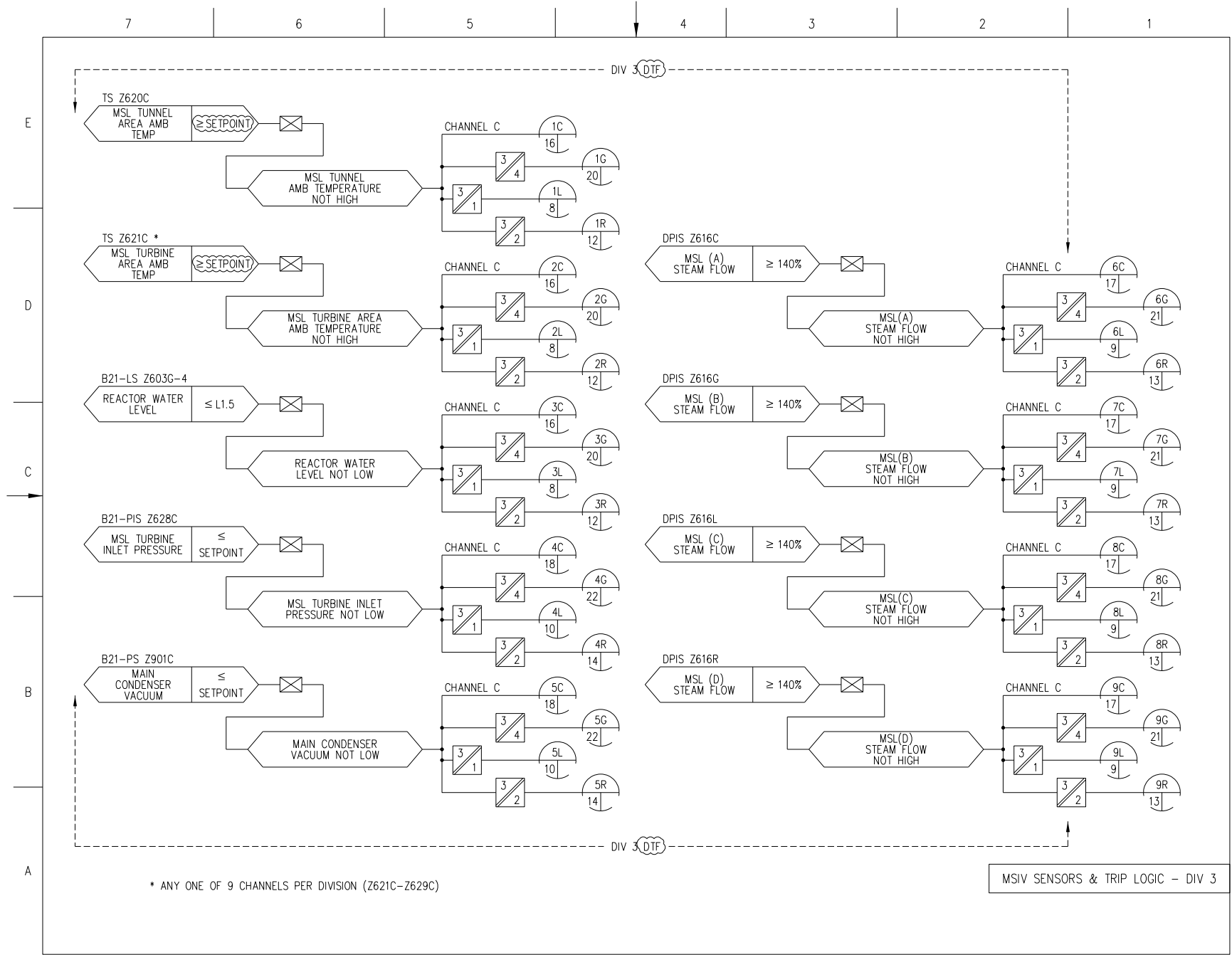


Figure 7.3-5 – Leak Detection and Isolation System IBD (Sheet 6 of 77)

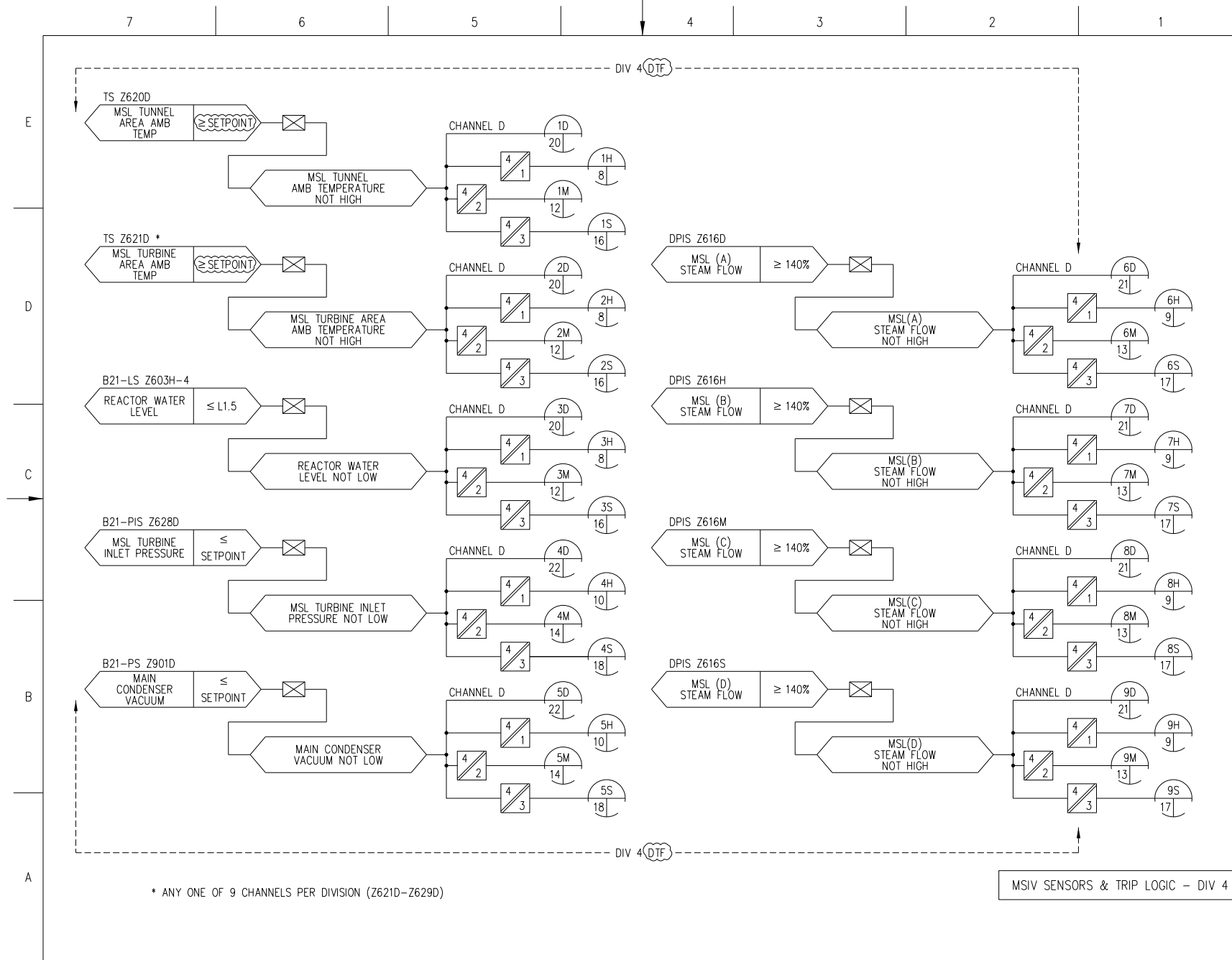


Figure 7.3-5 – Leak Detection and Isolation System IBD (Sheet 7 of 77)



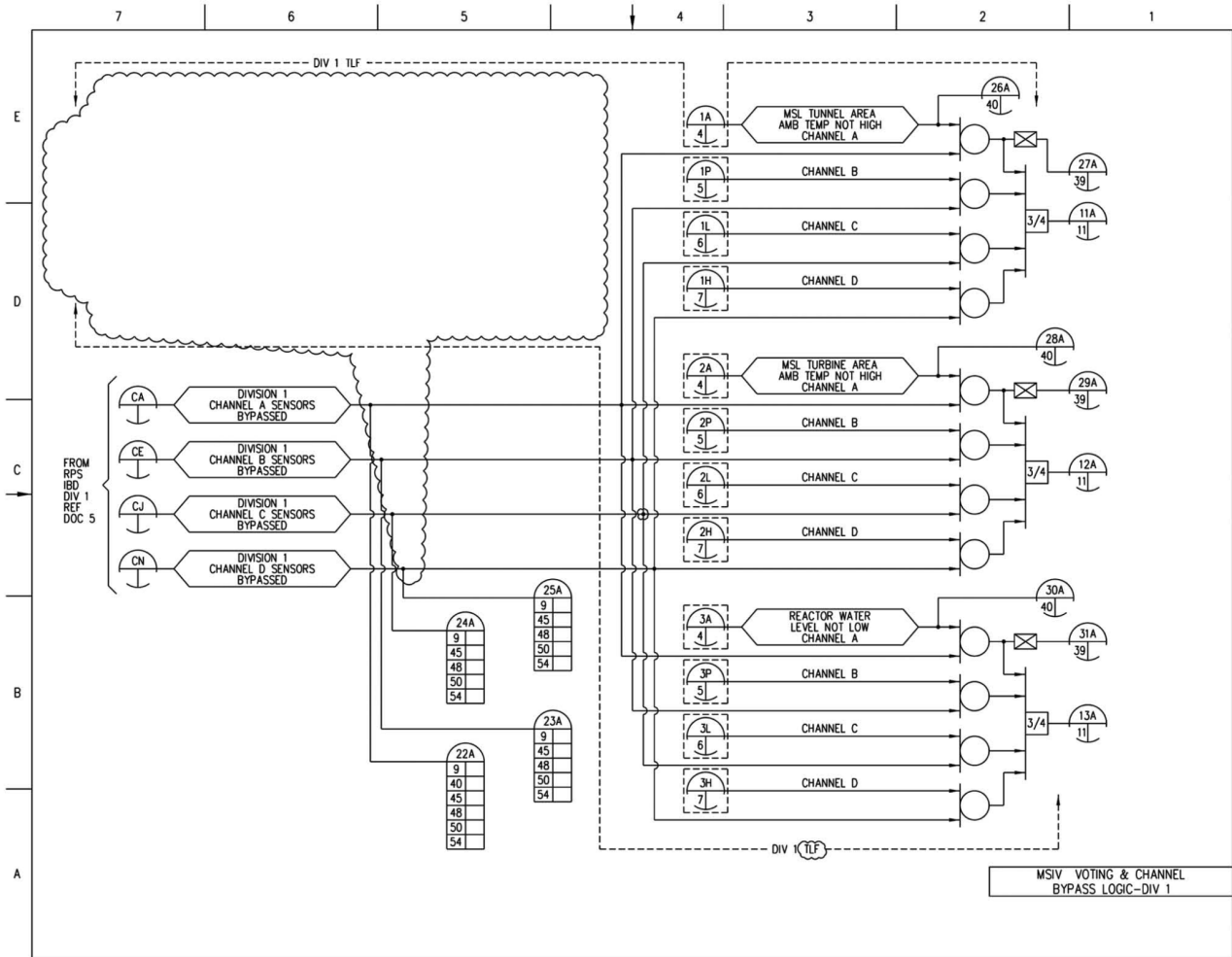


Figure 7.3-5 – Leak Detection and Isolation System IBD (Sheet 8 of 77)

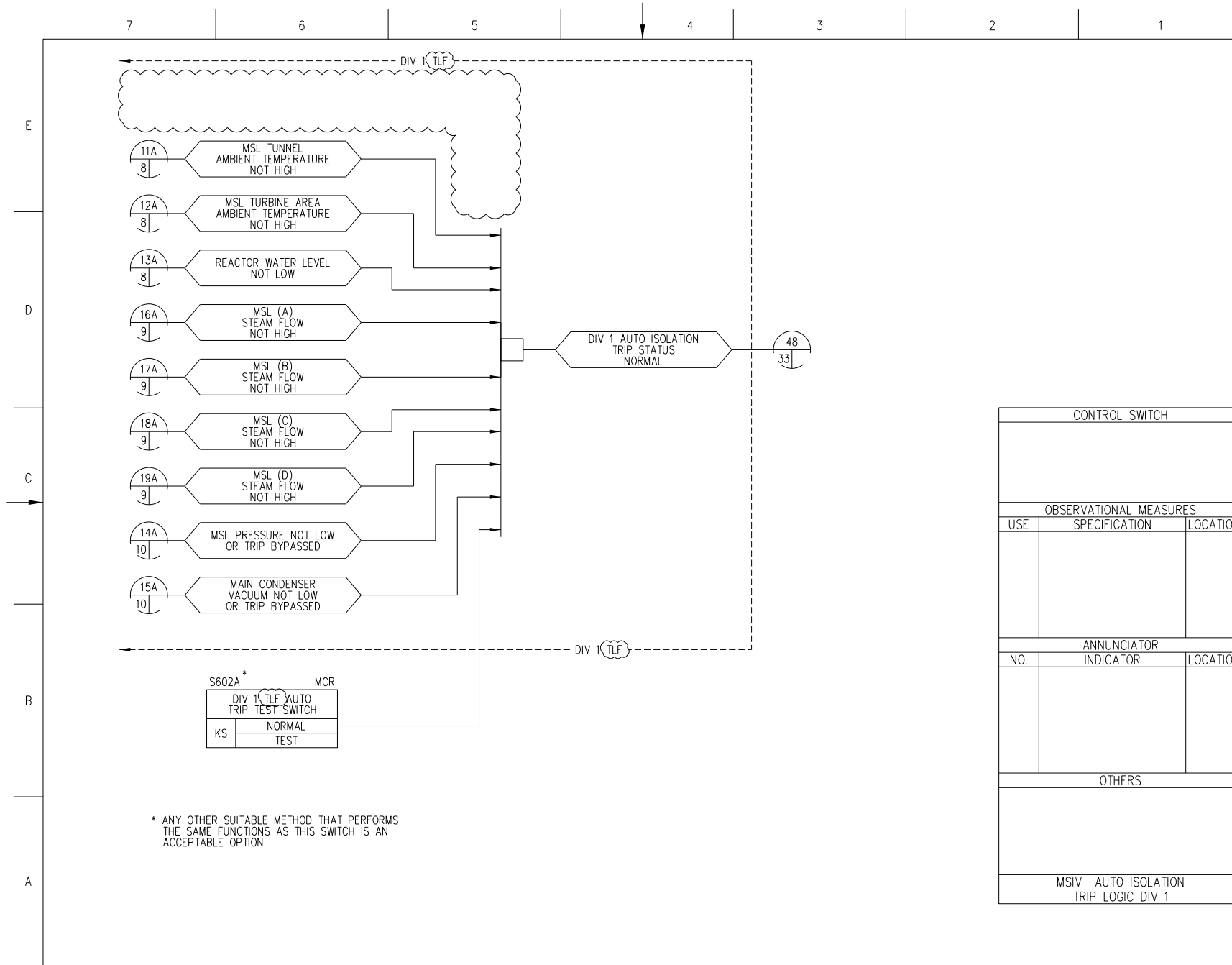


Figure 7.3-5 – Leak Detection and Isolation System IBD (Sheet 11 of 77)

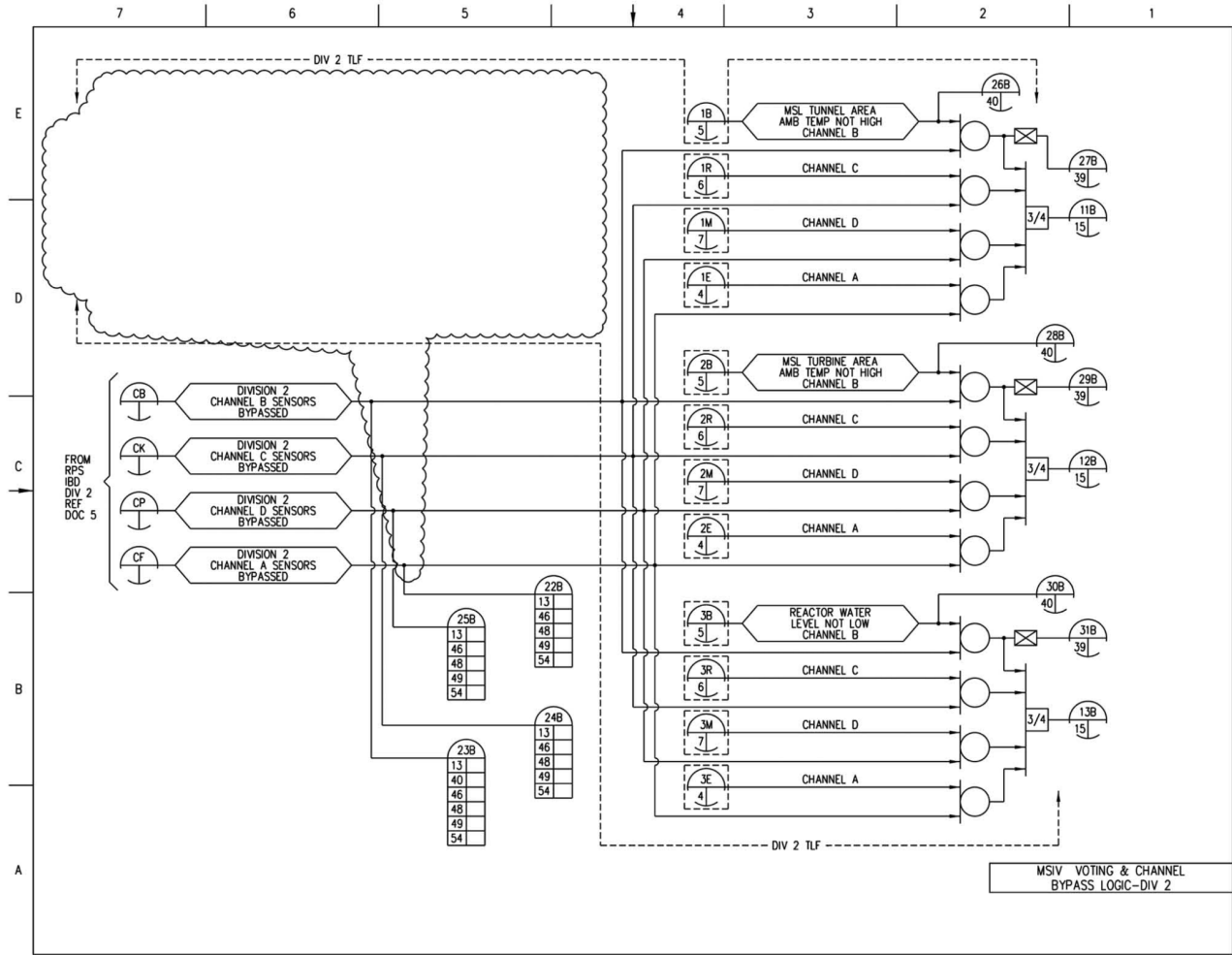


Figure 7.3-5 – Leak Detection and Isolation System IBD (Sheet 12 of 77)

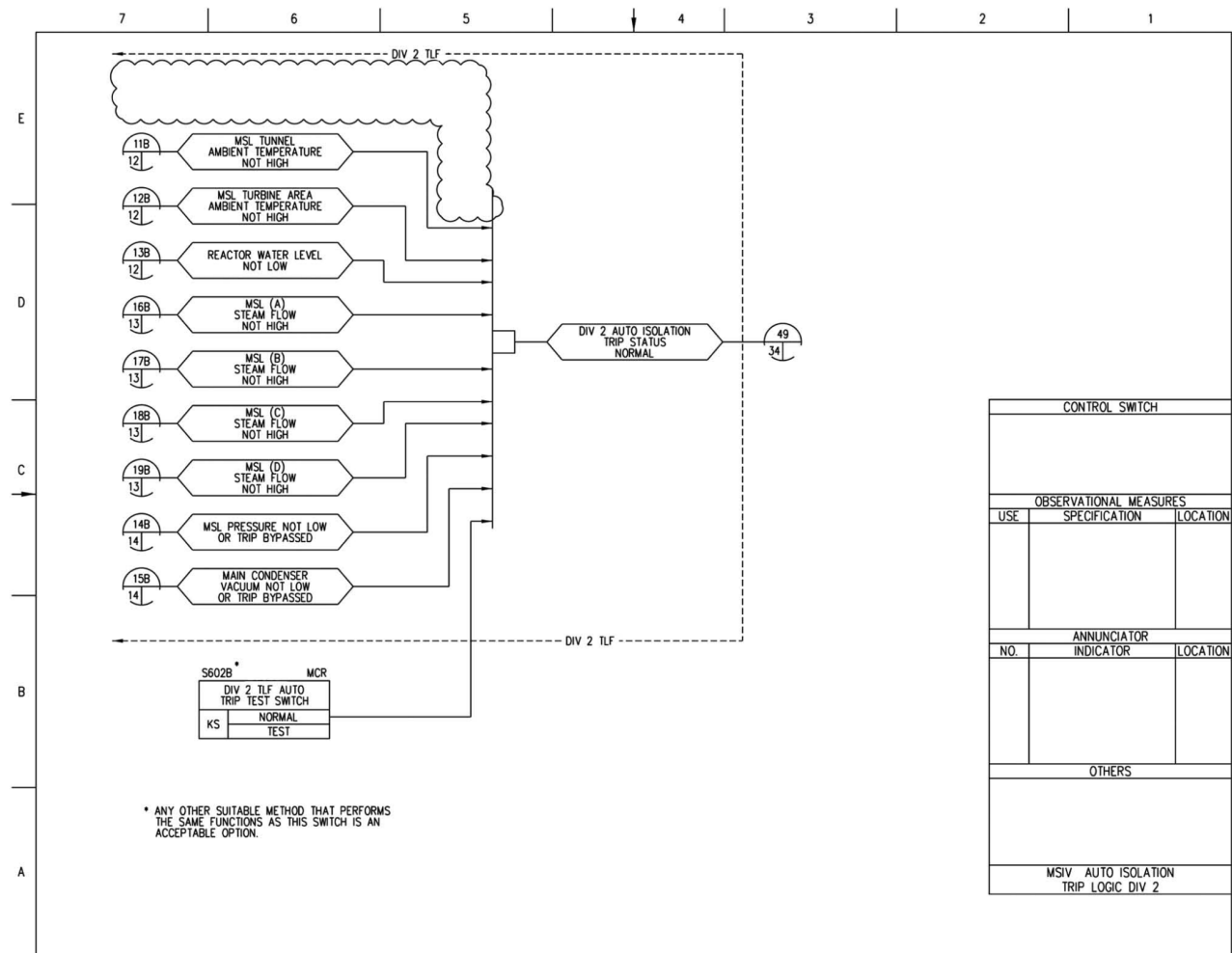


Figure 7.3-5 – Leak Detection and Isolation System IBD (Sheet 15 of 77)

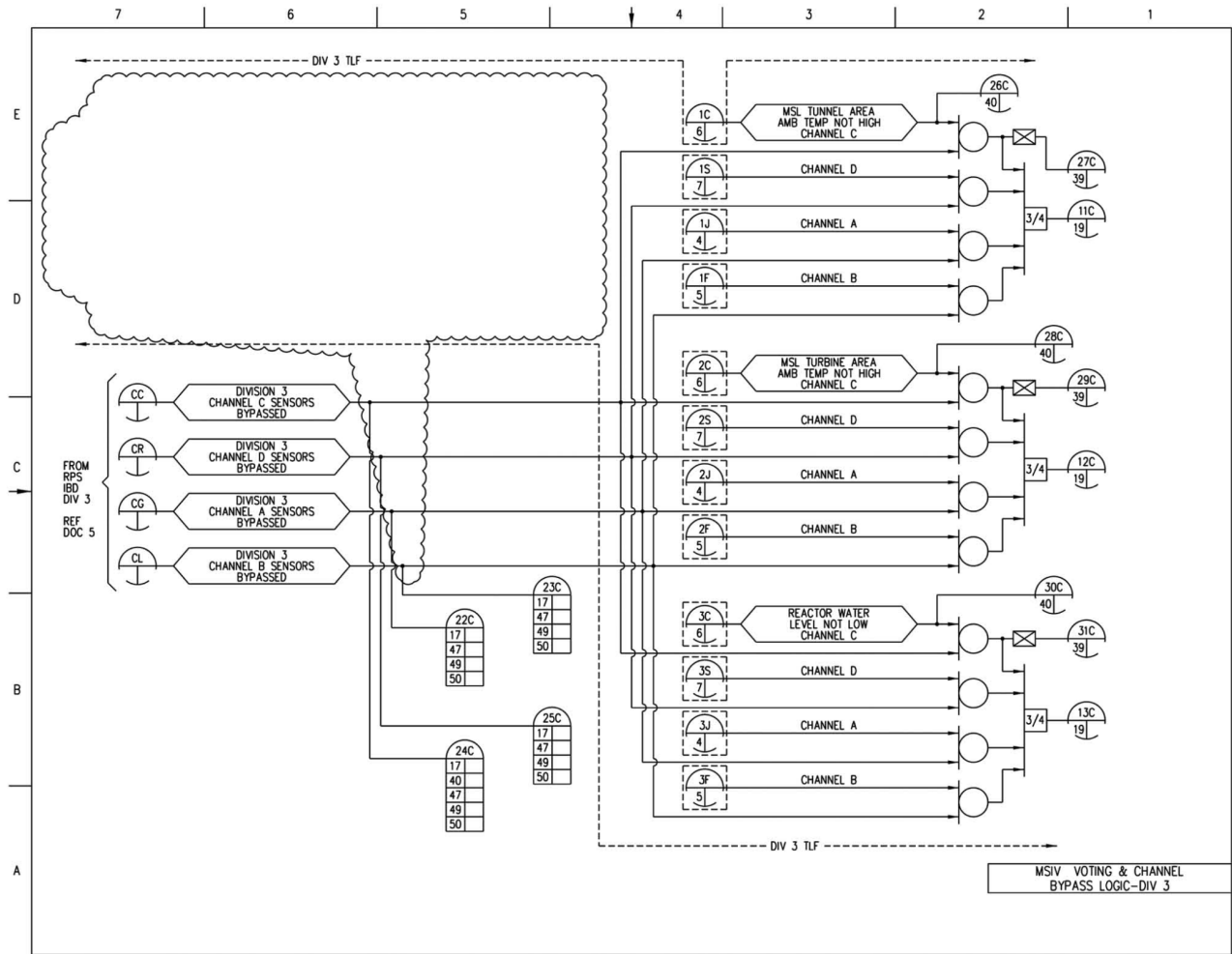


Figure 7.3-5 – Leak Detection and Isolation System IBD (Sheet 16 of 77)

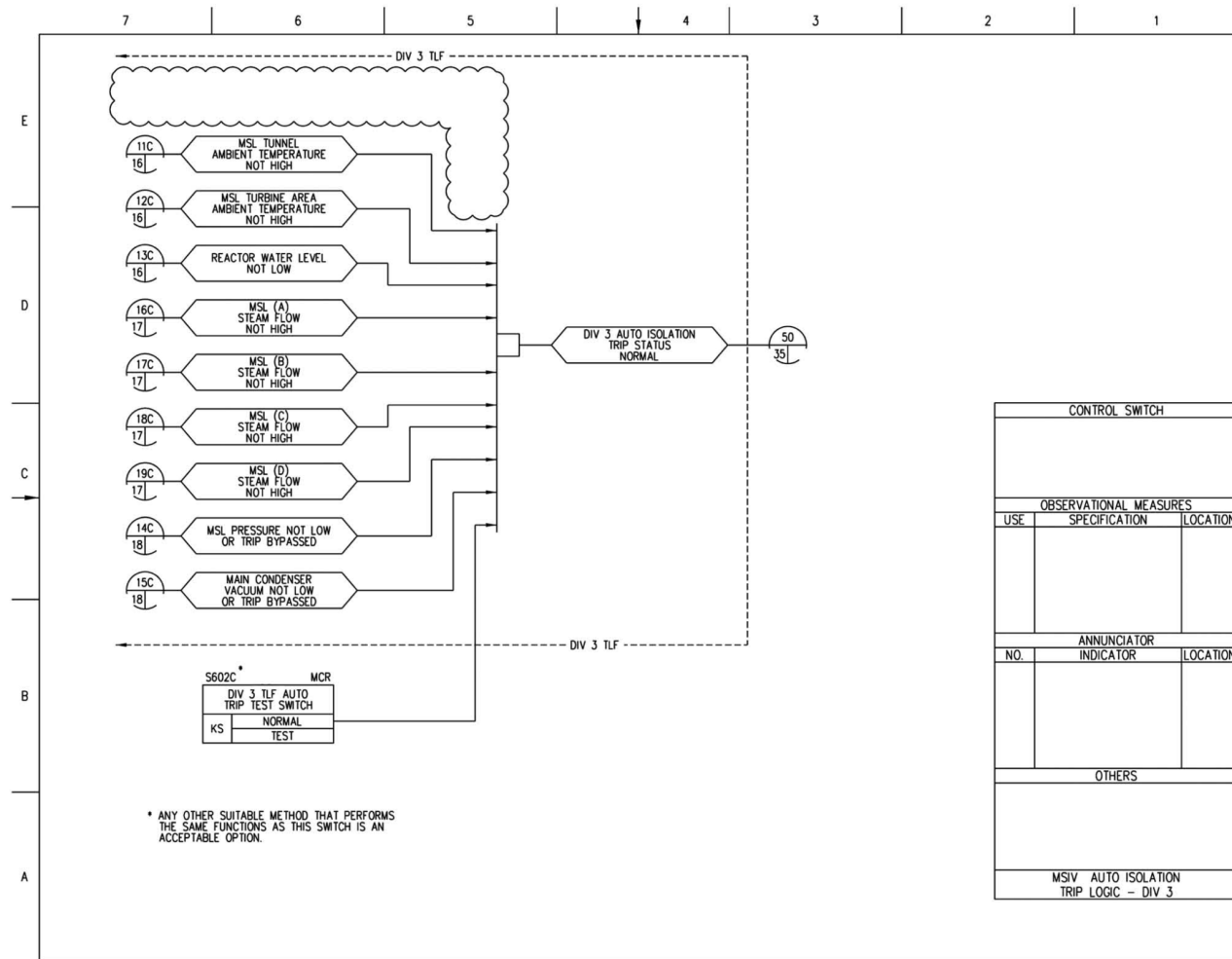


Figure 7.3-5 – Leak Detection and Isolation System IBD (Sheet 19 of 77)

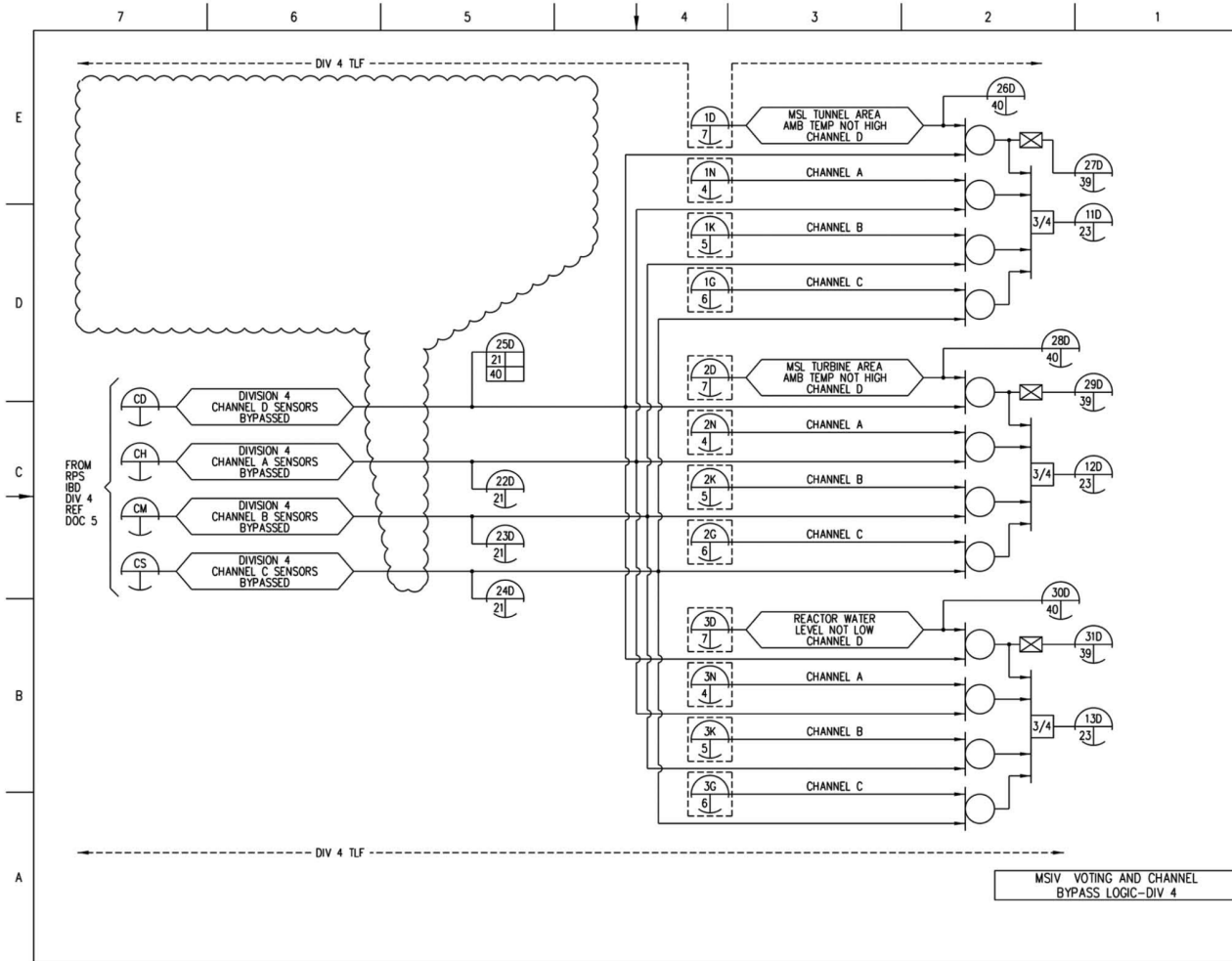


Figure 7.3-5 – Leak Detection and Isolation System IBD (Sheet 20 of 77)

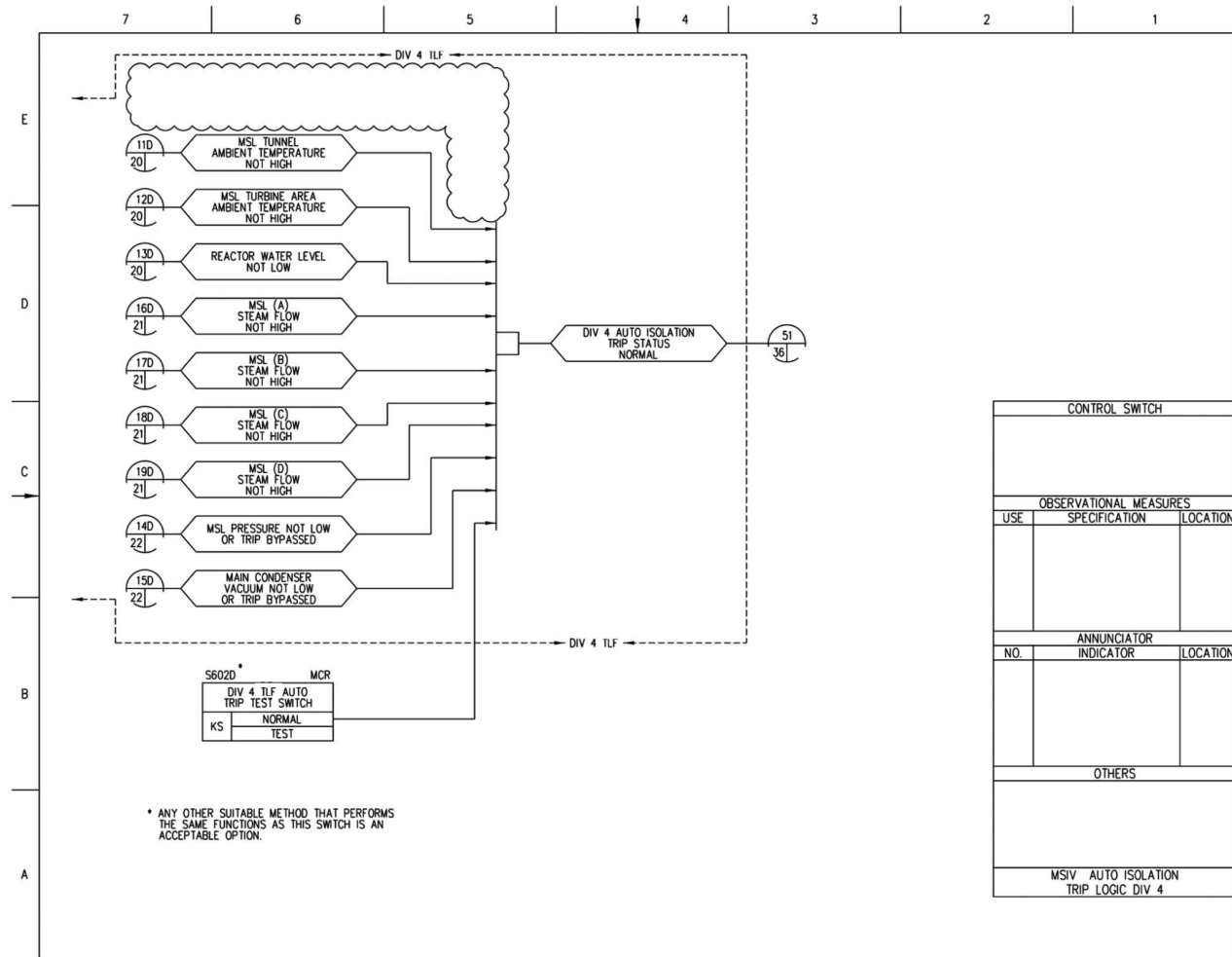


Figure 7.3-5 – Leak Detection and Isolation System IBD (Sheet 23 of 77)



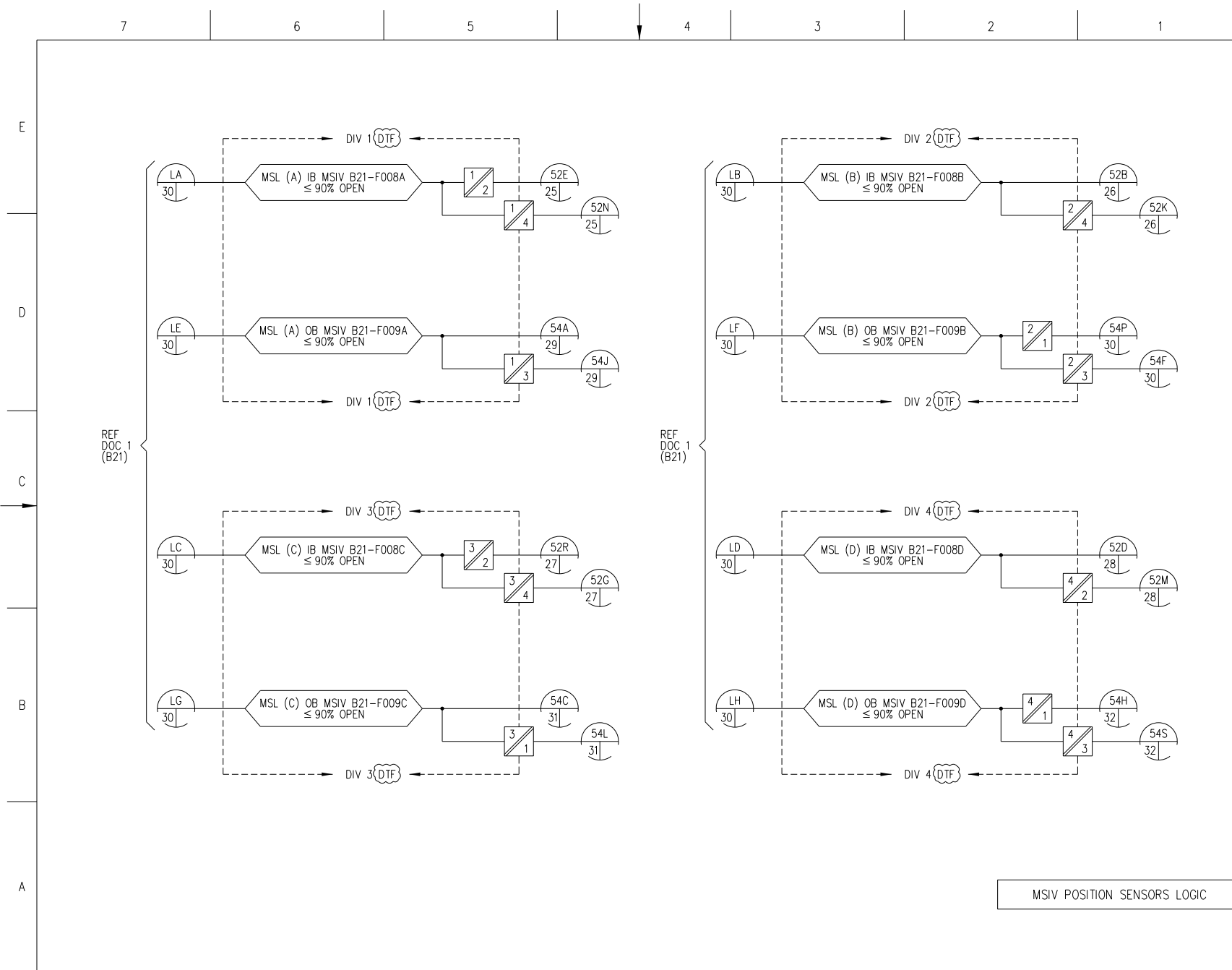


Figure 7.3-5 – Leak Detection and Isolation System IBD (Sheet 24 of 77)

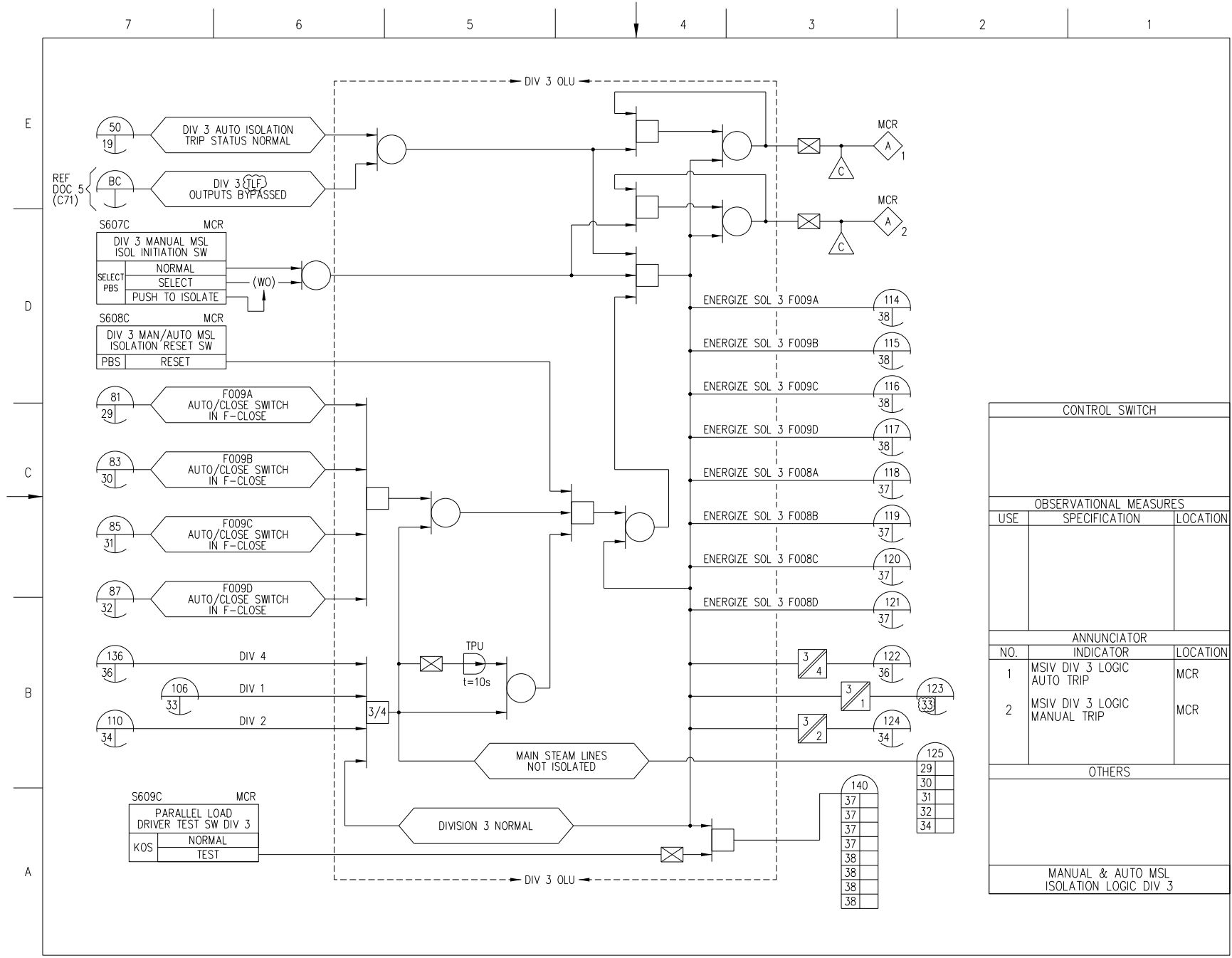


Figure 7.3-5 – Leak Detection and Isolation System IBD (Sheet 35 of 77)

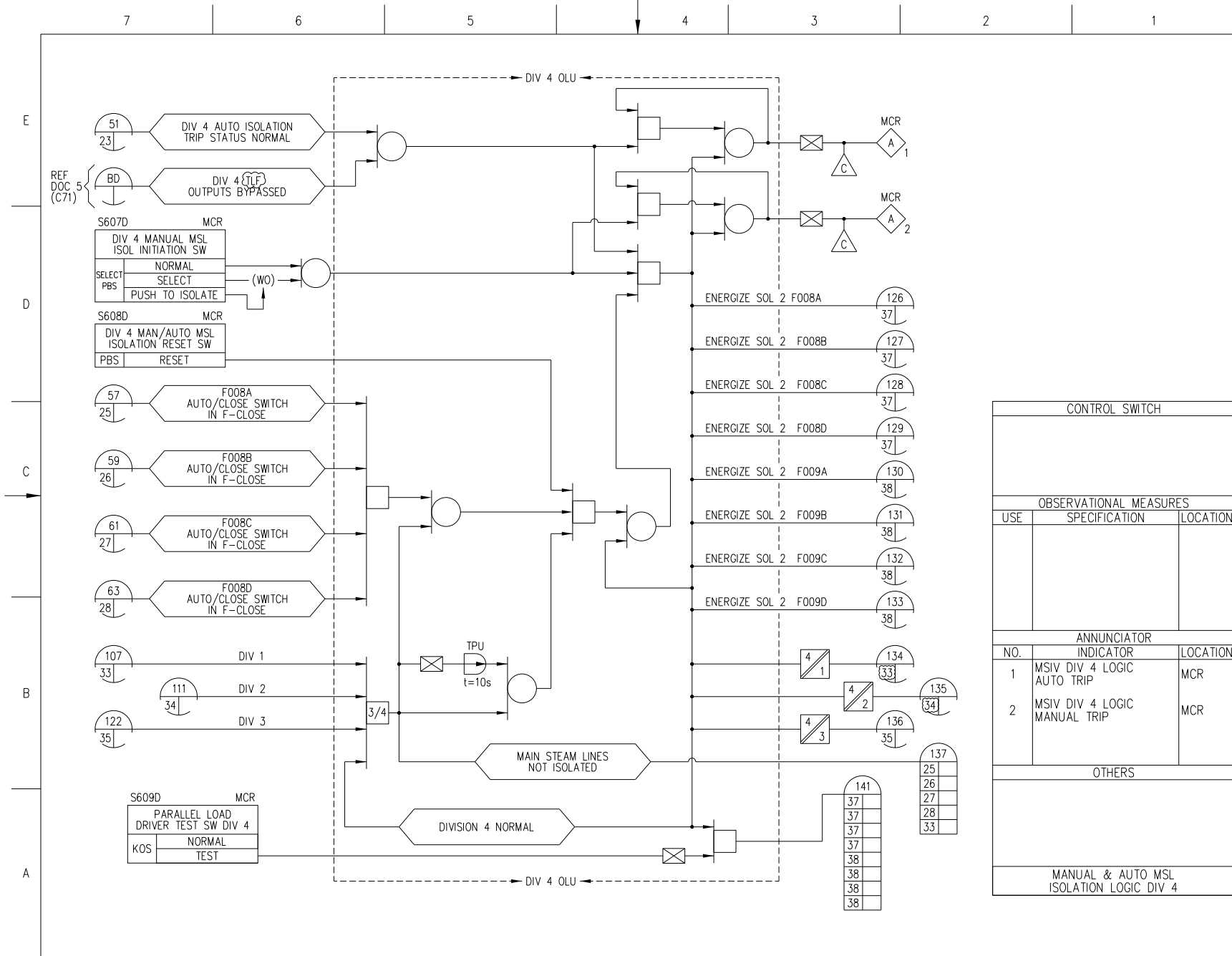


Figure 7.3-5 – Leak Detection and Isolation System IBD (Sheet 36 of 77)

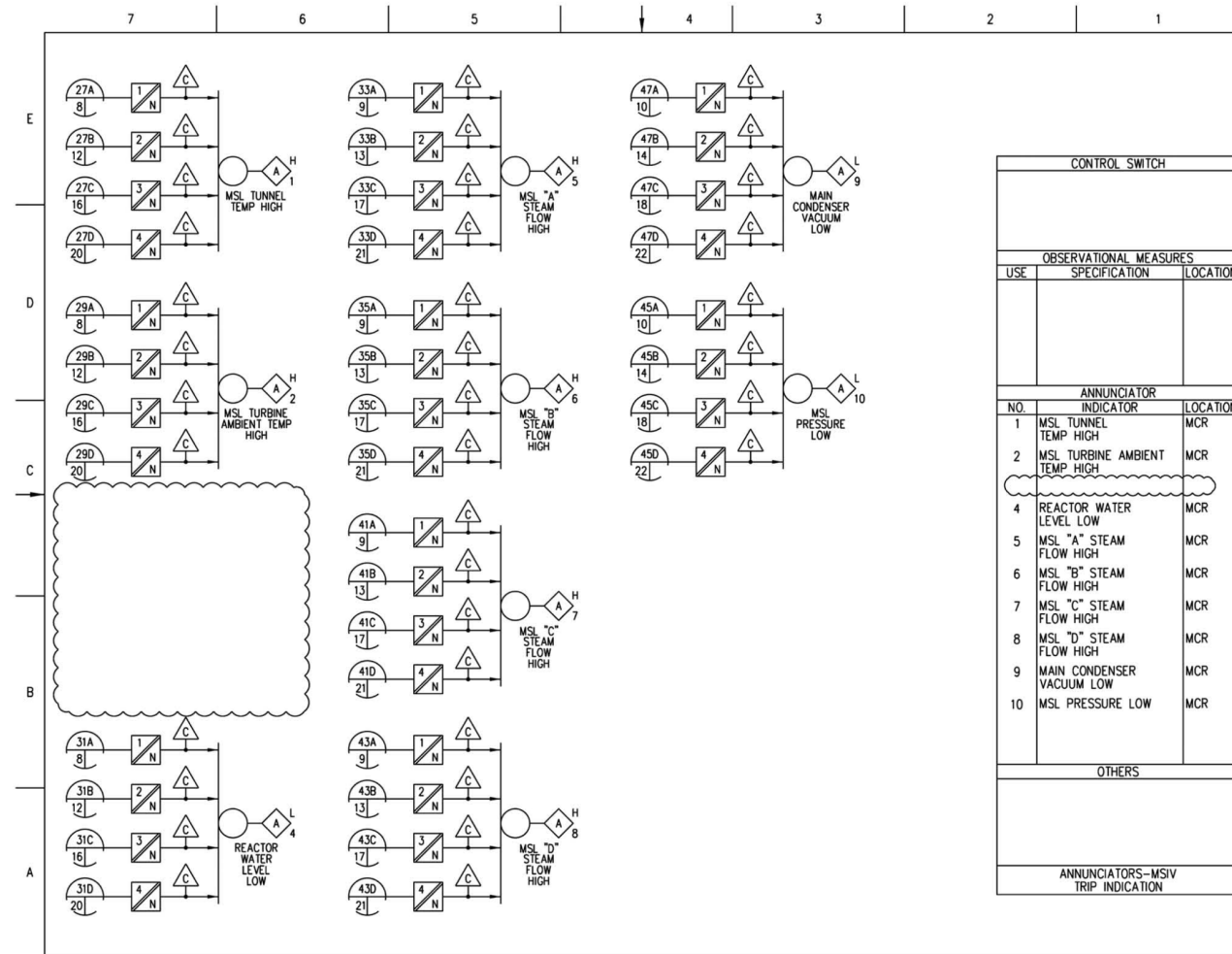


Figure 7.3-5 – Leak Detection and Isolation System IBD (Sheet 39 of 77)

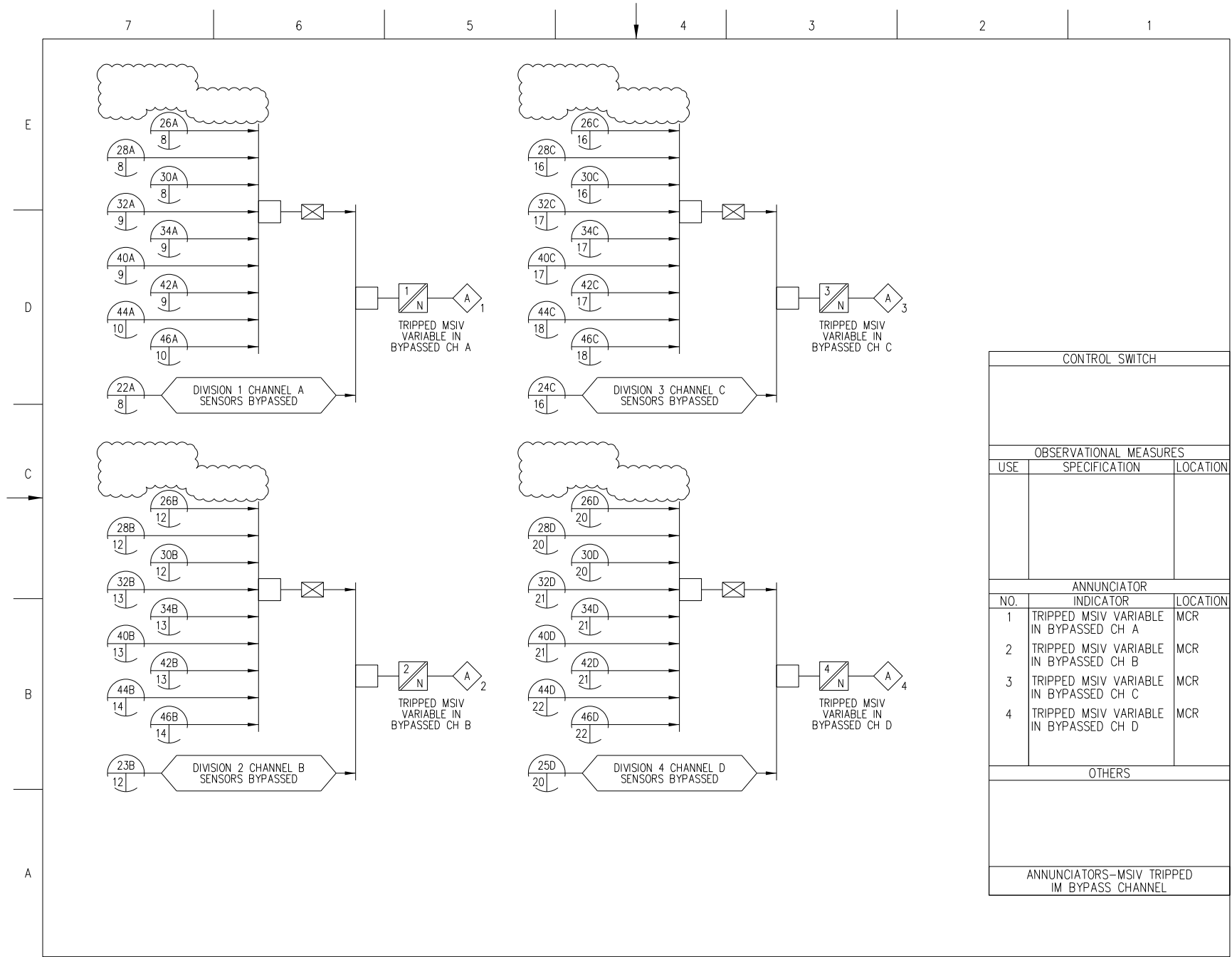


Figure 7.3-5 – Leak Detection and Isolation System IBD (Sheet 40 of 77)