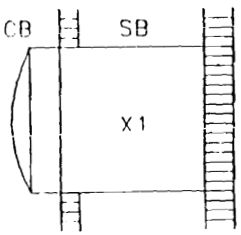
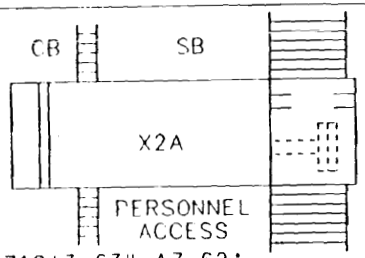
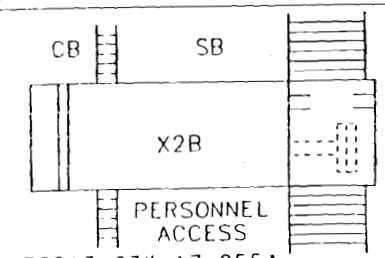
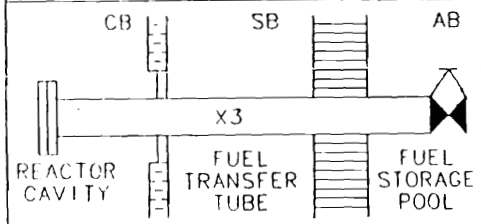
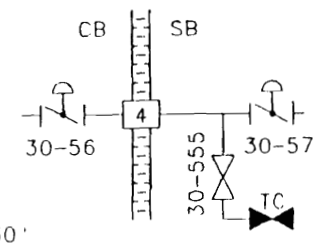
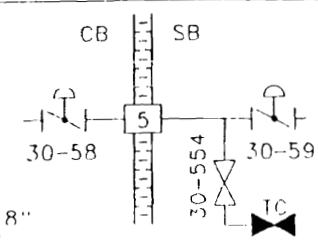
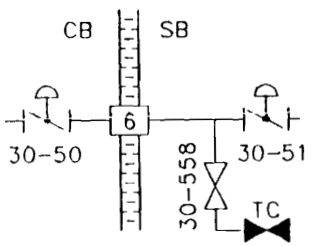
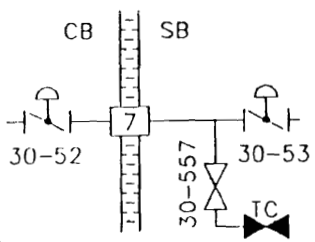
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																		
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 764'7.5" AZ 285°	44N250	–	A	C	AB	EQUIPMENT HATCH	–	–	–	D	M	LM	–	–	–	C	V	C	–	C	–	N	AB	N	–	
 EL 719'3.63" AZ 62°	44N240	–	A	C	AD	PERSONNEL AIR LOCK	IN OUT	– –	– –	D D	M M	LM LM	– –	– –	– –	C C	O O	C C	– –	O C	Y Y	N N	AB AB	N N	MK40	
 EL 760'3.63" AZ 255°	44N240	–	A	C	AD	PERSONNEL AIR LOCK	IN OUT	– –	– –	D D	M M	LM LM	– –	– –	– –	C C	O O	C C	– –	O C	Y Y	N N	AB AB	N N	MK40	

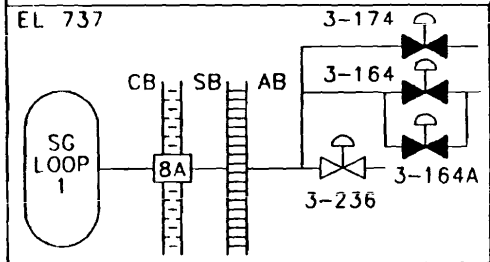
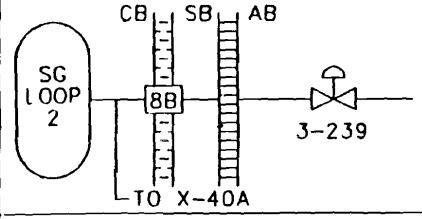
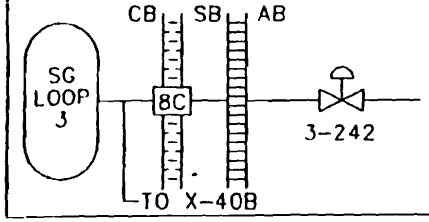
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS–TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																		
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 711'3" AZ 261'50'	47W455-1 72-4333 -PS1 (CB & I CONTRACT #75320)	56	W	C	AB D	FUEL TRANSFER TUBE	AB	–	–	BL	M	LM	–	–	–	C	V	C	–	C	N	N	AB	N	MK62	
 EL 735 AZ 36'30'	47W866-1	56	A	C	AB CE	LOWER COMPARTMENT PURGE AIR EXHAUST (30)	CB SB	56 57	A B	BF BF	AO AO	AT AT	RM RM	CV CV	4.0 4.0	V V	O O	C C	C C	C C	Y Y	N N	AC AC	N	F-005	3,6,14
 EL 739'8" AZ 116°	47W866-1	56	A	C	AB CE	NST RM PURGE AIR EXHAUST (30)	CB SB	58 59	B A	BF BF	AO AO	AT AT	RM RM	CV CV	4.0 4.0	V V	O O	C C	C C	C C	Y Y	N N	AC AC	N	F-005	3,6,14

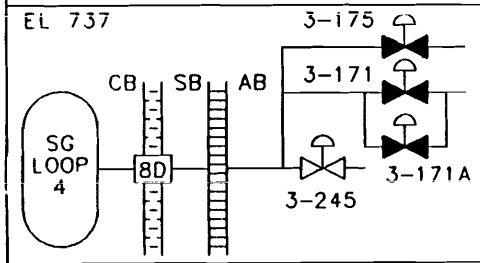
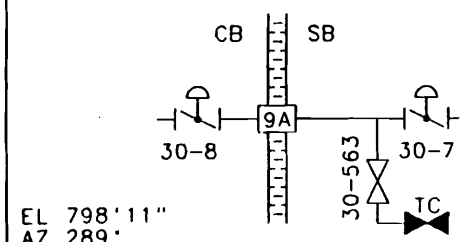
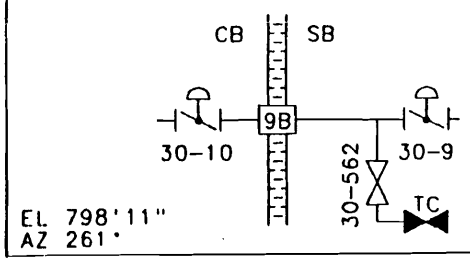
WA TS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 L 749'3" AZ 293°	47W866-1	56	A	C	AB CE	UPPER COMPARTMENT PURGE AIR EXHAUST (30)	CB SB	50 51	B A	BF BF	AO AO	AT AT	RM RM	CV CV	4.0 4.0	V V	O O	C C	C C	C C	Y Y	N N	AC AC	N	F-005	3,6,14
 L 751'4" AZ 249°30'	47W866-1	56	A	C	AB CE	UPPER COMPARTMENT PURGE AIR EXHAUST (30)	CB SB	52 53	A B	BF BF	AO AO	AT AT	RM RM	CV CV	4.0 4.0	V V	O O	C C	C C	C C	Y Y	N N	AC AC	N	F-005	3,6,14
X-8 790'0" AZ 266°	48N406	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	

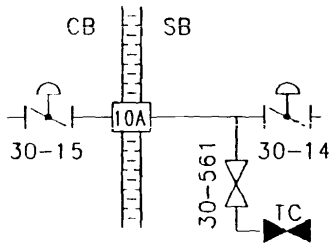
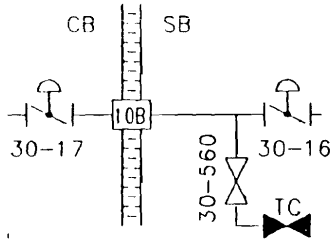
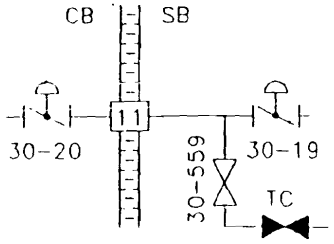
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 89

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
EL 737 	47W803 -1,2	57	W	H	BC E	FEEDWATER BYPASS (3)	AB	236 174 164 164A	A,B B A A	GL GL GL A	AO AO AO AO	RM RM RM RM	LM LM LM LM	– – – –	– – – –	O C C C	C C C C	C V V V	C C O C	C C C C	Y Y Y Y	N N N N	A A A A	N	MK112	22,23,25
EL 737 	47W803 -1,2	57	W	H	BC E	FEEDWATER BYPASS (3)	AB	239	A,B	GL	AO	RM	LM	–	–	O	C	C	C	C	Y	N	A	N	MK113	22,25
EL 737 	47W803 -1,2	57	W	H	BC E	FEEDWATER BYPASS (3)	AB	242	A,B	GL	AO	RM	LM	–	–	O	C	C	C	C	Y	N	A	N	MK114	22,25

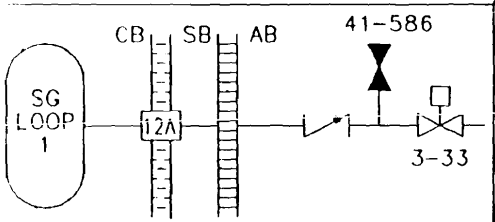
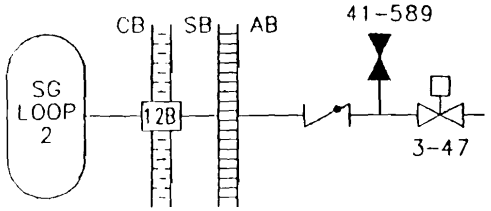
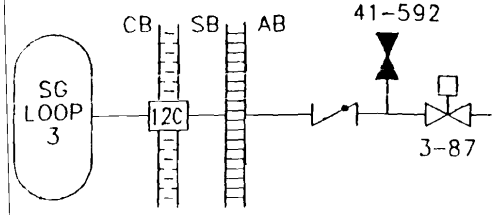
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 89

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
	47W803 -1,2	57	W	H	BC E	FEEDWATER BYPASS (3)	AB	245 175 171 171A	A,B A B B	GL GL GL A	AO AO AO AO	RM RM RM RM	LM LM LM LM	– – – –	– – – –	O C C C	C C C C	C V V V	C C O C	C C C C	Y Y Y Y	N N N N	A A A A	N	MK115	22,23,25
	47W866-1	56	A	C	AB CE	UPPER COMPARTMENT PURGE AIR SUPPLY (30)	CB SB	8 7	B A	BF BF	AO AO	AT AT	RM RM	CV CV	4.0 4.0	V V	O O	C C	C C	C C	Y Y	N N	AC AC	N	F-002	3,6,14
	47W866-1	56	A	C	AB CE	UPPER COMPARTMENT PURGE AIR SUPPLY (30)	CB SB	10 9	A B	BF BF	AO AO	AT AT	RM RM	CV CV	4.0 4.0	V V	O O	C C	C C	C C	Y Y	N N	AC AC	N	F-002	3,6,14

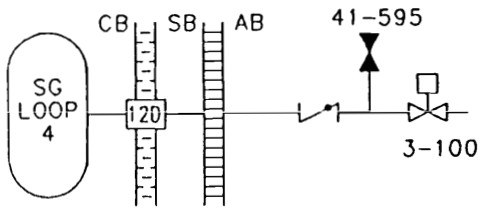
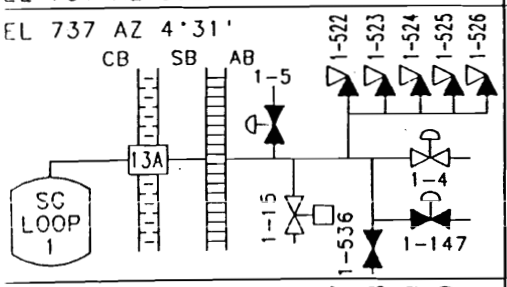
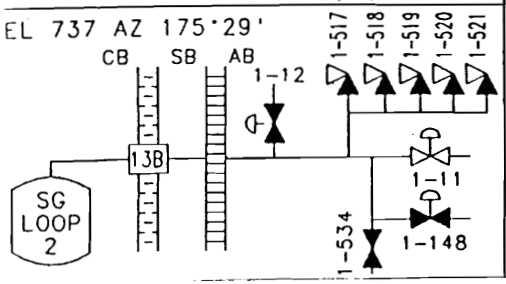
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 IL 737 AZ 301°	47W866-1	56	A	C	AB CE	LOWER COMPARTMENT PURGE AIR SUPPLY (30)	CB SB	15 14	B A	BF BF	AO AO	AT AT	RM RM	CV CV	4.0 4.0	V V	O O	C C	C C	C C	Y Y	N N	AC AC	N	F-002	3,6,14
 IL 737 AZ 236°30'	47W866-1	56	A	C	AB CE	LOWER COMPARTMENT PURGE AIR SUPPLY (30)	CB SB	17 16	A B	BF BF	AO AO	AT AT	RM RM	CV CV	4.0 4.0	V V	C C	C C	C C	C C	Y Y	N N	AC AC	N	F-002	3,6,14
 IL 728'6" AZ 57°	47W866-1	56	A	C	AB CE	INST RM PURGE AIR SUPPLY (30)	CB SB	20 19	A B	BF BF	AO AO	AT AT	RM RM	CV CV	4.0 4.0	V V	O O	C C	C C	C C	Y Y	N N	AC AC	N	F-002	3,6,14

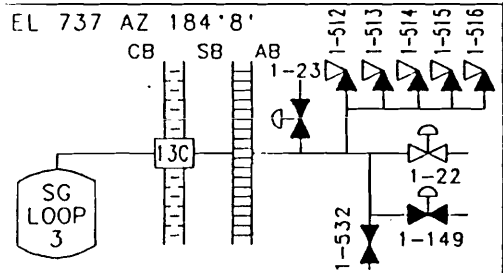
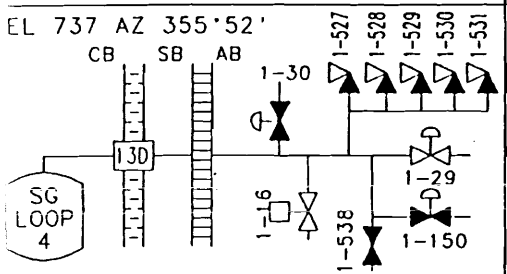
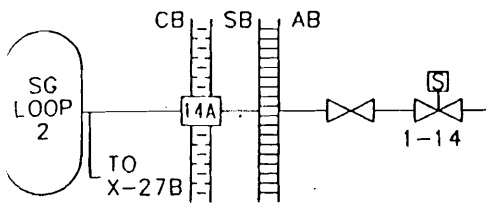
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																		
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 731 AZ 7°40'	47W803-1 47W862-2	57	W	H	BC E	FEEDWATER (3) & (41)	AB AB	33 586	A –	GA GA	MO M	AT LM	LM –	FW –	– –	O C	C V	C C	AI AI	C C	Y N	N N	A A	N	MK67	22,24
 EL 731 AZ 172°20'	47W803-1 47W862-2	57	W	H	BC E	FEEDWATER (3) & (41)	AB AB	47 589	B –	GA GA	MO M	AT LM	LM –	FW –	– –	O C	C V	C C	AI AI	C C	Y N	N N	A A	N	MK68	22,24
 EL 731 AZ 187°40'	47W803-1 47W862-2	57	W	H	BC E	FEEDWATER (3) & (41)	AB AB	87 592	A –	GA GA	MO M	AT LM	LM –	FW –	– –	O C	C V	C C	AI AI	C C	Y N	N N	A A	N	MK69	22,24

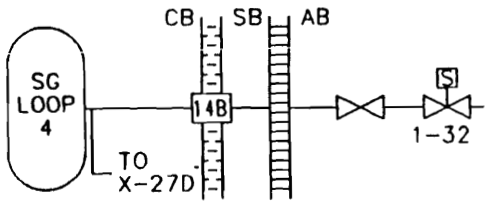
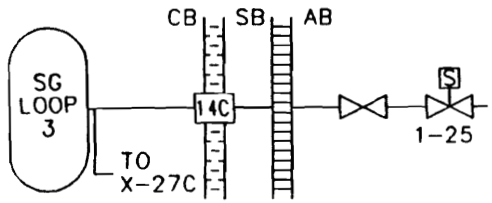
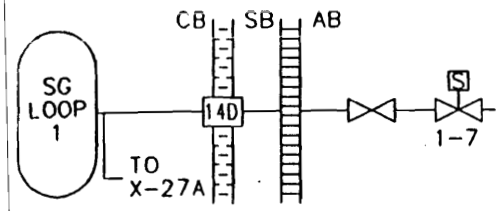
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 90

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	VALVE STATUS: NORMAL	VALVE STATUS: SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTE
 EL 731 AZ 352°20'	47W803-1 47W862-2	57 57	W –	H H	BC E	FEEDWATER (3,41)	AB AB	100 595	B –	GA GA	MO M	AT LM	LM –	FW –	– –	O C	C V	C V	AI AI	C C	Y N	N N	A A	N	MK70	22,24
EL 737 AZ 4°31' 	47W801-1 47W803-2	57	S	H	BC E	MAIN STEAM (1)	AB AB AB AB AB AB AB AB AB AB	4 5 15 147 522 523 524 525 526 536	A,B – A – – – – – – –	GL RV GA GA RV RV RV RV RV GL	AO AO MO AO – – – – – M	AT AT AT AT SA SA SA SA SA LM	LM RM RM RM – – – – – –	MS – – MS – – – – – –	– – – – – – – – – 	O C O C C C C C C C	C C C V C C C C C V	C C V C C C C C C C	C C C C – – – – – –	C C C C C C C C C C	Y N Y Y N N N N N N	N N N N N N N N N N	A A A A A A A A A A	N	MK63	22
EL 737 AZ 175°29' 	47W801-1	57	S	H	BC E	MAIN STEAM (1)	AB AB AB AB AB AB AB AB AB AB	11 12 148 517 518 519 520 521 534	A,B – – – – – – – – –	GL RV GA GA RV RV RV RV RV GL	AO AO AO – – – – – – M	AT AT AT SA SA SA SA SA SA LM	LM RM RM – – – – – – –	MS – MS – – – – – – –	– – – – – – – – – 	O C C C C C C C C C	C C V C C C C C C V	C C C C C C C C C C	C C C – – – – – – –	C C C C C C C C C C	Y N N N N N N N N N	N N N N N N N N N N	A A A A A A A A A A	N	MK64	22

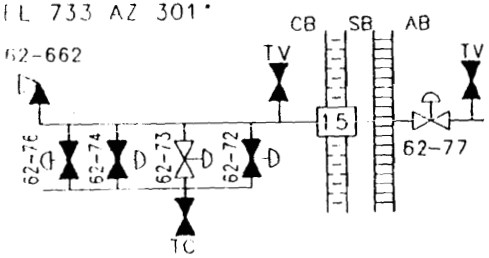
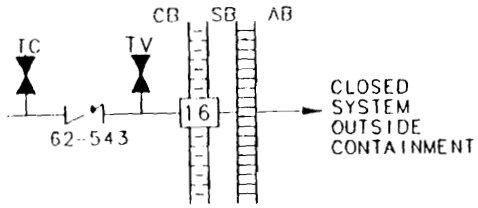
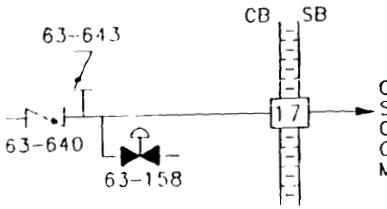
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 90

PENETRATION DATA							VALVE DATA																		
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	VALVE STATUS: NORMAL	VALVE STATUS: SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTE
EL 737 AZ 184°8' 	47W801-1	57	S	H	BC E	MAIN STEAM (1)	AB	22	A,B	GL	AO	AT	LM	MS	-	O	C	C	C	C	Y	N	A	N	MK65	22
							AB	23	-	RV	AO	AT	RM	-	-	C	C	C	C	C	N	N	A			
							AB	149	-	GA	AO	AT	RM	MS	-	C	V	C	C	C	N	N	A			
							AB	512	-	GA	-	SA	-	-	-	C	C	C	-	C	N	N	A			
							AB	513	-	RV	-	SA	-	-	-	C	C	C	-	C	N	N	A			
							AB	514	-	RV	-	SA	-	-	-	C	C	C	-	C	N	N	A			
							AB	515	-	RV	-	SA	-	-	-	C	C	C	-	C	N	N	A			
							AB	516	-	RV	-	SA	-	-	-	C	C	C	-	C	N	N	A			
							AB	532	-	GL	M	LM	-	-	-	C	V	C	-	C	N	N	A			
EL 737 AZ 355°52' 	47W801-1 47W803-2	57	S	H	BC E	MAIN STEAM (1)	AB	29	A,B	GL	AO	AT	LM	MS	-	O	C	C	C	C	Y	N	A	N	MK66	22
								16	A	GA	MO	AT	RM	-	-	O	C	V	C	C	Y	N	A			
								30	-	RV	AO	AT	RM	-	-	C	-	C	C	C	N	N	A			
								150	-	GL	AO	AT	RM	MS	-	C	V	C	-	C	N	N	A			
								527	-	RV	-	SA	-	-	-	C	C	C	-	C	N	N	A			
								528	-	RV	-	SA	-	-	-	C	C	C	-	C	N	N	A			
								529	-	RV	-	SA	-	-	-	C	C	C	-	C	N	N	A			
								530	-	RV	-	SA	-	-	-	C	C	C	-	C	N	N	A			
								531	-	RV	-	SA	-	-	-	C	C	C	-	C	N	N	A			
								538	-	GL	M	LM	-	-		C	V	C	-	C	N	N	A			
	47W801-2	57	W	H	BE	STEAM GENERATOR BLOWDOWN (1)	AB	14	A	GL	SO	AT	RM	PA	15.0	O	C	C	C	C	Y	N	A	N	AS14A	22

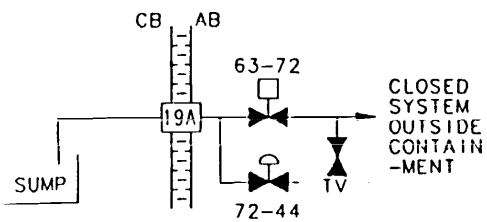
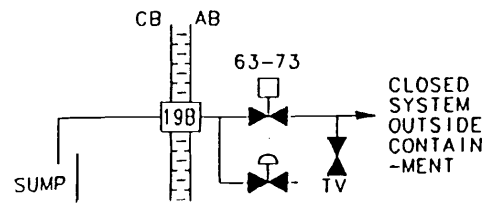
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 89

PENETRATION DATA							VALVE DATA																		
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTE
 EL 739'6" AZ 350°30'	47W801-2	57	W	H	BE	STEAM GENERATOR BLOWDOWN (1)	AB	32	A	GL	SO	AT	RM	PA	15.0	O	C	C	C	C	Y	N	A	N	AS14B	22
 EL 734'5" AZ 9°30'	47W801-2	57	W	H	BE	STEAM GENERATOR BLOWDOWN (1)	AB	25	B	GL	SO	AT	RM	PA	15.0	O	C	C	C	C	Y	N	A	N	AS14C	22
 EL 734'5" AZ 350°30'	47W801-2	57	W	H	BE	STEAM GENERATOR BLOWDOWN (1)	AB	7	B	GL	SO	AT	RM	PA	15.0	O	C	C	C	C	Y	N	A	N	AS14D	22

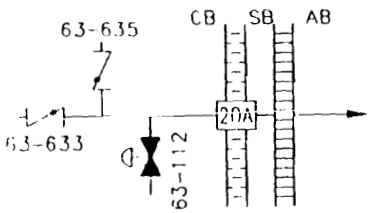
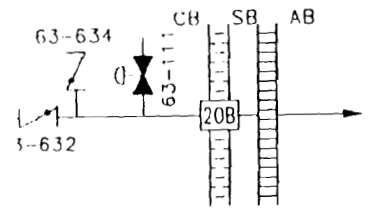
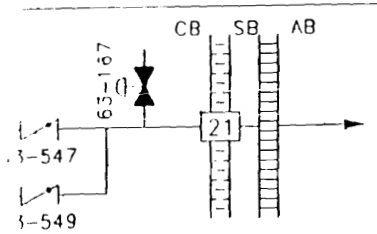
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
EL 733 AZ 301° 	47W809-1	55	W	H	BD	CVCS LETDOWN (62)	CB CB CB CB CB AB	72 73 74 662 76 77	A A A – A B	GL GL GL RV GL GL	AO AO AO – AO AO	AT AT AT SA AT AT	RM RM RM – RM RM	PA PA PA – PA PA	10.0 10.0 10.0 – 10.0 10.0	C O C C C O	V V V C C V	C C C C C C	C C C C C C	C C C C C C	Y Y Y Y Y Y	N N N N N N	AC AC AC AC AC AC	N	AS15	4
 EL 730'6" AZ 299°30'	47W809-1	55	W	C	AD	CVCS NORMAL CHARGING (62)	CB	543	–	CK	–	SA	RM	–	–	O	V	C	–	–	N	N	A	N	MK19	
 EL 732 AZ 281°30'	47W811-1 47W810-1	55	W	C	BD	RHR HOT LEG INJECTION (63)	CB CB CB	640 643 158	– – –	CK CK GL	– – AO	SA SA RM	– – LM	– – RM	– – –	C C V	V V V	C C C	– – –	– – C	N N N	Y Y Y	A A A	E	MK27	

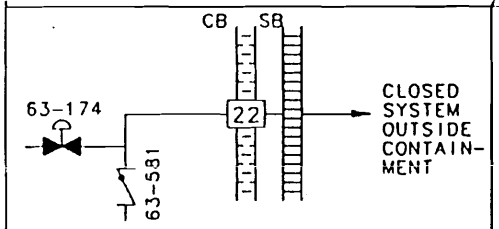
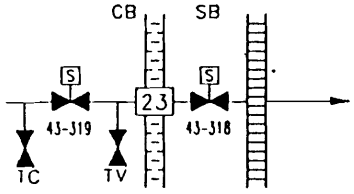
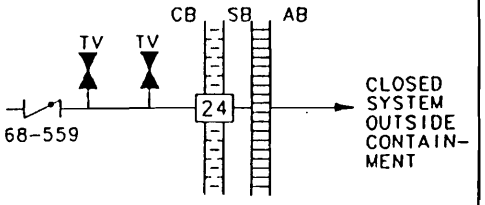
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS–TABLE 6.2.4–1 AMENDMENT 90

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTE
X–18	48N406	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	
EL 740 AZ 145																										
EL 689 AZ 318° 	47W811-1 47W812-1	–	W	H	D	SUMP SUCTION TO RHR PUMP 1A-A (63,72)	AB AB	72 44	A A	GA GA	MO MO	RM RM	LM LM	– –	– –	C C	C C	V V	AI AI	C C	Y Y	Y Y	A A	E	–	
EL 689 AZ 325° 	47W811-1 47W812-1	–	W	H	D	SUMP SUCTION TO RHR PUMP 1B-B (63,72)	AB AB	73 45	B B	GA GA	MO MO	RM RM	LM LM	– –	– –	C C	C C	V V	AI AI	C C	Y Y	Y Y	A A	E	–	

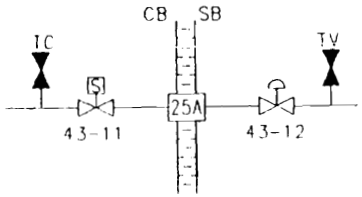
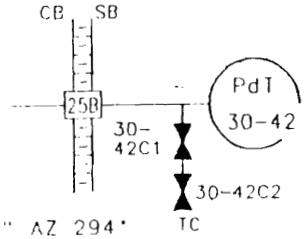
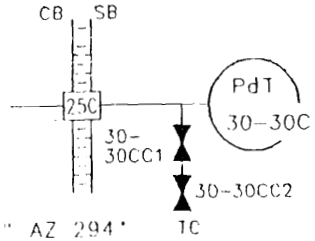
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 732 AZ 291°-30"	47W811-1	55	W	C	B D	RHR PUMP DISCHARGE TR B (63)	CB CB CB	112 635 633	B – –	GL CK CK	AO – –	RM SA SA	LM – –	– – –	– – –	V C C	V C C	C V V	C – –	C – –	N N N	N Y Y	A A A	E	AS20A	
 EL 732 AZ 287°30'	47W811-1	55	W	C	BD	RHR PUMP DISCHARGE TR A (63)	CB CB CB	111 632 634	A – –	GL CK CK	AO – –	RM SA SA	LM – –	– – –	– – –	V C C	V C C	C V V	C – –	C – –	N N N	N Y Y	A A A	E	AS20B	
 EL 728'6" AZ 289°30'	47W811-1	55	W	C	BD	SIS PUMP DISCHARGE TO HOT LEGS TR B (63)	CB CB CB	167 547 549	B – –	GL CK CK	AO – –	RM SA SA	– – –	– – –	– – –	C – –	C – –	V – –	– – –	C – –	N N N	N Y Y	A A A	E	AS21	

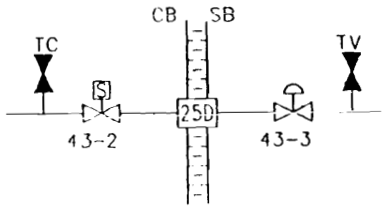
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 90

PENETRATION DATA							VALVE DATA																		
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 730'3" AZ 294'45'	47W811-1	55	W	C	BD	SIS CHARGING PUMP DIS-CHARGE (63)	CB CB	174 581	– –	GL CK	AO –	LM SA	LM –	– –	– –	V –	V –	C –	C –	C –	N N	N Y	A A	E	AS22	
 EL 729' AZ 283'	47W625-15	56	A	C	AB D	PAS CONT. AIR INTAKE TR.B (43)	CB SB	319 318	B B	GL GL	SO SO	RM RM	LM LM	– –	– –	C C	C C	V V	C C	C C	Y Y	N N	AC AC	E	MK61	19
 EL 727'6" AZ 301'	47W813-1 47W811-1 47W812-1	56	W	H	BD	RELIEF VALVE DISCHARGE (68)	CB	559	–	CK	–	SA	–	–	–	C	C	C	–	–	N	Y	A	E	AS24	25

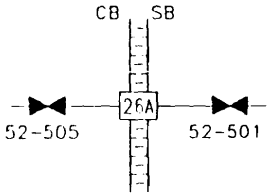
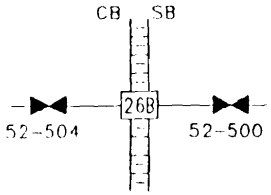
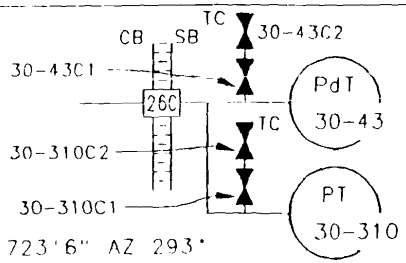
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																		
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 723'6" AZ 294°	47W625-1	55	W	H	AD	PRESSURIZER LIQUID SAMPLE (43)	CB SB	11 12	B A	GL GL	SO AO	AT AT	RM RM	PA PA	5.0 5.0	V V	V V	C C	C C	C C	N N	N N	AC AC	N	MK44H	15
 EL 723'6" AZ 294°	47W600-89	–	A	C	B	dP SENSOR (30)	SB SB SB	SNSR. 42C1 42C2	– – –	– GL GL	– M M	– LM LM	– – –	– – –	– – –	O C C	O V V	O C C	– – –	– C C	– N N	N N N	A A –	E	–	12
 EL 723'6" AZ 294°	47W600-89	–	A	C	B	dP SENSOR (30)	SB SB SB	SNSR. 30CC1 30CC2	– – –	– GL GL	– M M	– LM LM	– – –	– – –	– – –	O C C	O V V	O C C	– – –	– C C	– N N	N N N	A A –	N	–	12

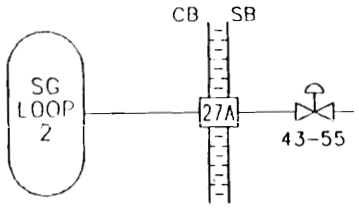
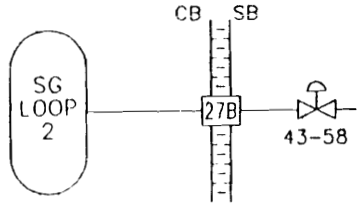
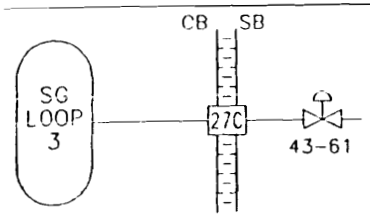
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS–TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 723'6" AZ 294°	47W625-1	55	S	H	AD	PRESSURIZER STEAM SAMPLE (43)	CB SB	2 3	B A	GL GL	SO AO	AT AT	RM RM	PA PA	5.0 5.0	V V	V V	C C	C C	C C	N N	N N	AC AC	N	MK44H	15

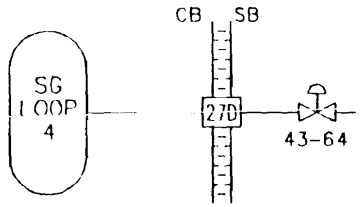
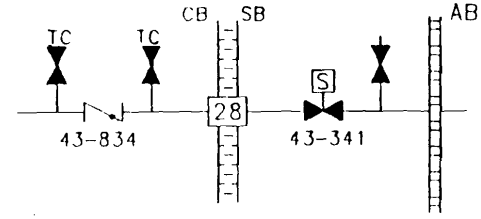
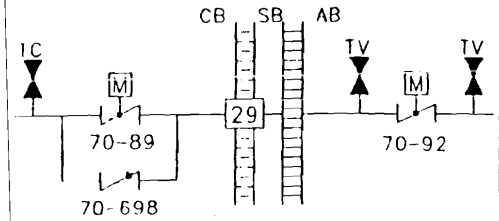
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																		
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 723'6" AZ 293°	47W331-3	56	A	C	B	ILRT SENSOR LINE (52) TEST INSTRUMENTATION	CB SB	505 501	– –	GL GL	M M	LM LM	– –	– –	– –	C C	V V	C C	– –	O O	N N	N N	AC AC	N	–	
 EL 723'6" AZ 293°	47W331-3	56	A	C	B	ILRT SENSOR LINE (52) TEST INSTRUMENTATION	CB SB	504 500	– –	GL GL	M M	LM LM	– –	– –	– –	C C	V V	C C	– –	O O	N N	N N	AC AC	N	–	
 EL 723'6" AZ 293°	47W600-89	--	A	C	B	dP SENSOR (30)	SB SB SB SB SB	SNSRS 43C1 43C2 310C1 310C2	– – – – –	– GL GL GL GL	– M M M M	– LM LM LM LM	– – – – –	– – – – –	– – – – –	O C C C C	– V V V V	O C C C C	– – – – –	C C C C C	N N N N N	N N N N N	A A – A –	E	–	12,13

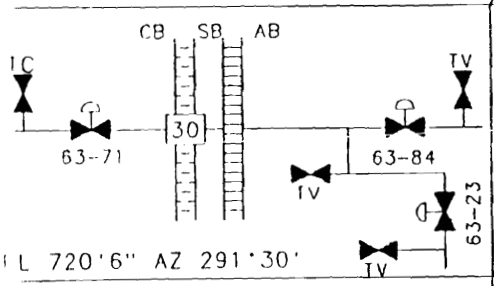
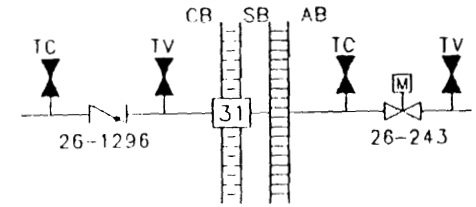
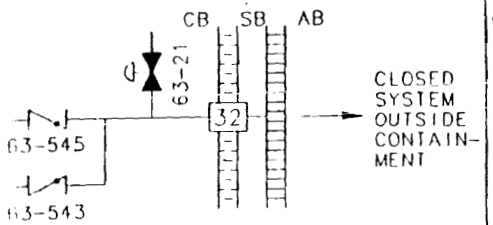
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS–TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 723'6" AZ 292°	47W625-2	56	W	H	A B D	STM GEN NO. 1 SAMPLE (43) SAMPLE AND WATER QUALITY	SB	55	A	GL	AO	AT	RM	PA	10.0	V	V	C	C	C	N	N	A	N	MK046M	22
 EL 723'6" AZ 292°	47W625-2	56	W	H	AB D	STM GEN NO. 2 SAMPLE (43)	SB	58	A	GL	AO	AT	RM	PA	10.0	V	V	C	C	C	N	N	A	N	MK46M	22
 EL 723'6" AZ 292°	47W625-2	56	W	H	AB D	STM GEN NO. 3 SAMPLE (43)	SB	61	A	GL	AO	AT	RM	PA	10.0	V	V	C	C	C	N	N	A	N	MK46M	22

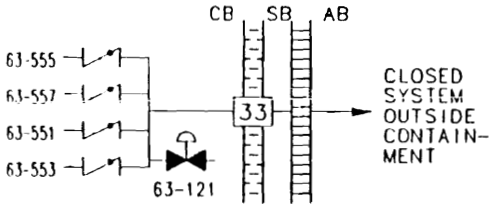
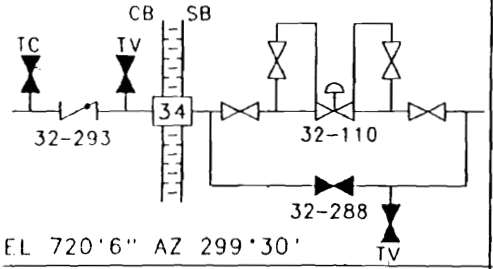
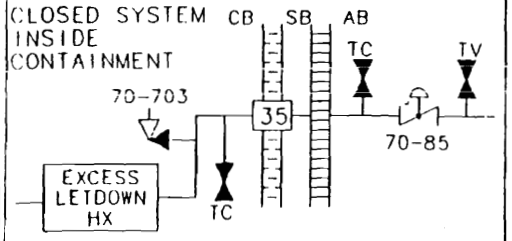
WA.TS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 723'6" AZ 292°	47W625-2	56	W	H	AB D	STM GEN NO. 4 SAMPLE (43)	SB	64	A	GL	AO	AT	RM	PA	10.0	V	V	C	C	C	N	N	A	N	MK46M	22
 EL 721 AZ 287°30'	47W625-15	56	W	C	AB D	PAS CONT SUMP RTRN (43)	CB SB	834 341	– B	CK GL	– SO	SA RM	– LM	– –	– –	C C	C C	V V	C C	– C	N N	N N	AC AC	E	MK54	19
 EL 720 AZ 288°30'	47W859-2 -3	56	W	C	AD	CCS FROM RC PUMP COOLERS (70)	CB AB CB	89 92 698	B A –	BF BF CK	MO MO –	AT AT SA	RM RM –	PB PB –	66.0 66.0 –	O O O	O O O	C C V	AI AI –	C C –	Y Y N	N N N	AC AC AC	N	MK50	8

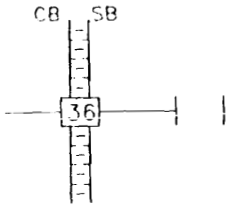
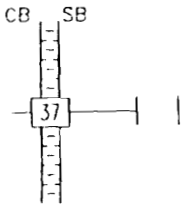
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 720'6" AZ 291°30'	47W811-1	56	W	C	BD	ACCUM TO HOLDUP TANKS (63)	CB AB AB	71 84 23	A B B	GL GL GL	AO AO AO	AT AT AT	RM RM RM	PA PA PA	10.0 10.0 10.0	V V V	V V V	C C C	C C C	C C C	Y Y Y	N N N	AC AC AC	N	AS30	9
 EL 722 AZ 289°30'	47W850-9	56	A	C	AB D	FIRE PROTECTION (26)	CB AB	1296 243	– A	CK GA	– MO	SA AT	– LM	– PA	– 20.0	O O	O O	C C	– C	C C	N Y	N N	AC AC	N	MK49	-
 EL 720'6" AZ 282°30'	47W811-1	55	W	C	BD	SI TO HOT LEGS (63)	CB CB CB	545 543 21	– – –	CK CK GL	– – AO	SA SA RM	– – LM	– – –	– – –	C C V	C C V	V V C	– – C	– – C	N N N	Y Y N	A A A	E	AS32	

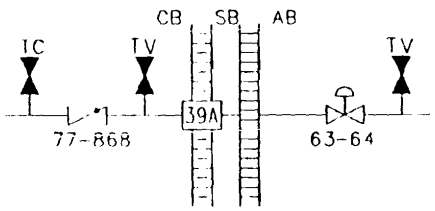
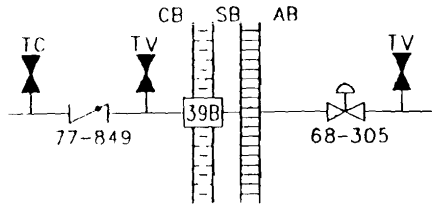
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																		
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	VALVE STATUS: NORMAL	VALVE STATUS: SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 720'6" AZ 277°30'	47W811-1	55	W	C	BD	SI TO LOW HEAD SI (63)	CB CB CB CB CB	553 551 557 555 121	– – – – –	CK CK CK CK GL	– – – – AO	SA SA SA SA RM	– – – – LM	– – – – –	– – – – –	C C C C V	C C C C V	V V V V C	– – – – C	– – – – C	N N N N N	Y Y Y Y N	A A A A A	E	AS33	
 EL 720'6" AZ 299°30'	47W848-1	56	A	C	AB D	CONTROL AIR I & C (32)	CB SB SB	293 110 288	– A –	CK GL GA	– AO M	SA AT LM	– RM –	– PB –	– 10.0 –	O O C	O O C	C C C	– C AI	– C C	N Y N	N N N	AC AC AC	N	MK43	10
 EL 720'6" AZ 301°30'	47W859-2, 3	57	W	C	AD	CCS FROM EXCESS LETDN HX (70)	CB AB	703 85	B	RV BF	– AO	SA AT	– RM	– PA	– 10.0	V V	V C	V C	C C	C C	N Y	N N	AC AC	N	MK42	11

WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

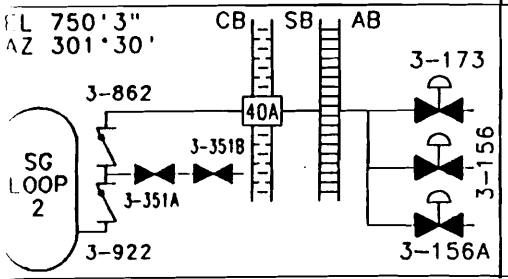
PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 742'6" AZ 280°	72-4333-310	–	A	C	AB	SG. CHEM. CLEANING	SB	–	–	BL	M	LM	–	–	–	C	V	C	–	C	N	N	AB	N	MK20	
 EL 771'6" AZ 265°	47W301-1	–	A	C	AB	MAINT. PORT	SB	–	–	BL	M	LM	–	–	–	C	V	C	–	C	N	N	AB	N	MK14	
X-38 EL 771'6" AZ 268°	48N406	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	

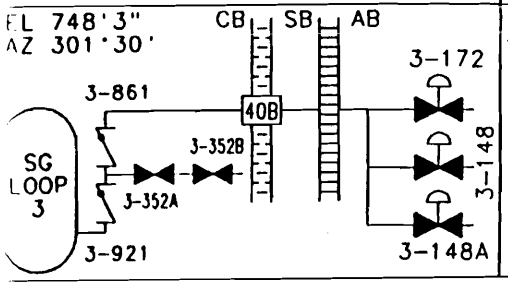
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																		
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	VALVE STATUS: NORMAL	VALVE STATUS: SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 L 720'6" AZ 280°	47W830-6	56	N2	C	AD	N2 TO ACCUM (77/63)	CB AB	868 64	– A	CK GL	– AO	SA AT	– RM	– PA	– 10.0	O O	O O	C C	– C	– C	N Y	N N	AC AC	N	MK55M	
 L 720'6" AZ 280°	47W830-6	56	N2	C	AD	N2 TO PRESS RELIEF TK (77/68)	CB AB	849 305	– A	CK DI	– AO	SA AT	– RM	– PA	– 10.0	O O	O O	C C	– C	– C	N Y	N N	AC AC	N	MK55M	
X-39C L 720'6" AZ 280°	47W331-2	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	

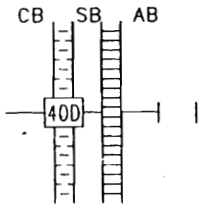
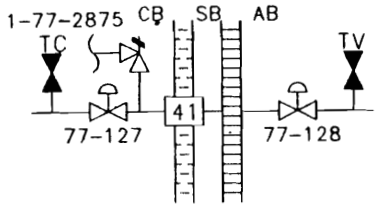
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 89

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
	47W331-2	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	
X-39D																										
EL 720'6" AZ 280°																										
EL 750'3" AZ 301°30'	47W803-2	57	W	C	BC E	AUX FW (3)	AB AB AB	156 156A 173	A A B	GL A GL	AO AO AO	RM RM RM	LM LM LM	– – –	– – –	C C C	C C C	V V V	O C C	C C C	Y Y Y	N N N	A A A	E	MK9	22
EL 748'3" AZ 301°30'	47W803-2	57	W	C	BC E	AUX FW (3)	AB AB AB	148 148A 172	B B A	GL A GL	AO AO AO	RM RM RM	LM LM LM	– – –	– – –	C C C	C C C	V V V	O C C	C C C	Y Y Y	N N N	A A A	E	MK11	22

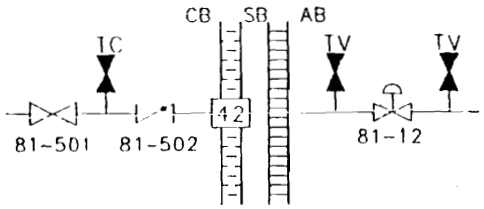
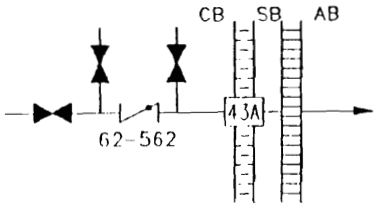
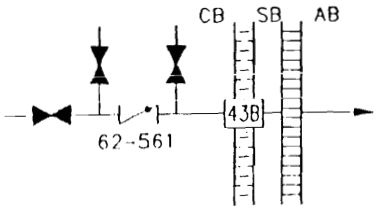




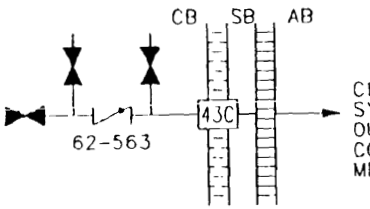
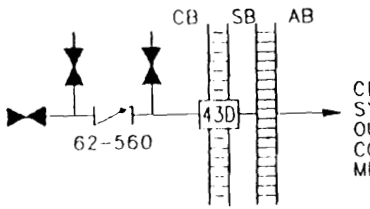
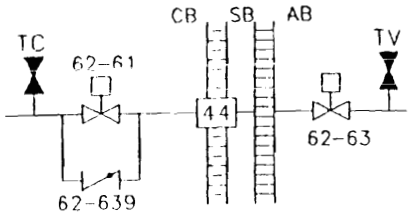
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 88

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
X-40C EL 750'3" AZ 299°30'	48N406	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	
 EL 748'3" AZ 299°30'	47W846-2 47W492-2	–	A	C	AD	SERVICE AIR (33)	AB	–	–	BL	M	LM	–	–	–	C	C	C	–	C	–	N	AB	N	MK12	
 EL 719'6" AZ 294°	47W851-1	56	W	C	AD	FL SUMP PUMP DISCH (77)	CB AB CB	127 128 2875	B A –	BA BA RV	AO AO –	AT AT –	RM RM –	PA PA –	10.0 10.0 –	O O C	O O C	C C V	C C C	C C C	Y Y N	N N N	AC AC AC	N	MK47	

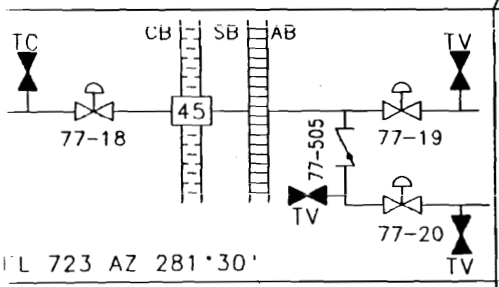
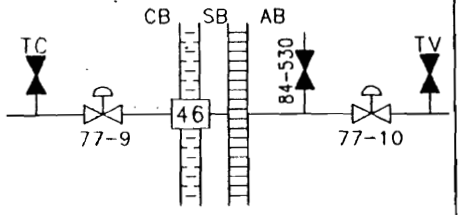
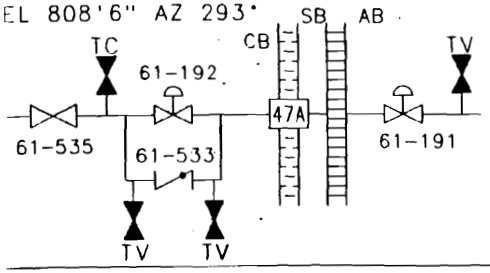
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																	
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 723'6" AZ 301°	47W819-1	56	W	C	ABD	PRESS RLF TK MAKE-UP (81)	CB AB	502 12	– A	CK DI	– AO	SA AT	– RM	– PA	– 10.0	V V	C C	C C	– C	– C	N Y	N N	AC AC	N	MK39	
 EL 728'6" AZ 293°30'	47W809-1	55	W	C	AD	TO RCP SEALS (62)	CB	562	–	CK	–	SA	–	–	–	O	C	C	–	–	N	N	A	N	MK31	
 EL 728'6" AZ 292°	47W809-1	55	W	C	AD	TO RCP SEALS (62)	CB	561	–	CK	–	SA	–	–	–	O	C	C	–	–	N	N	A	N	MK29	

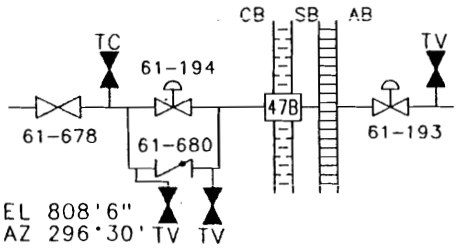
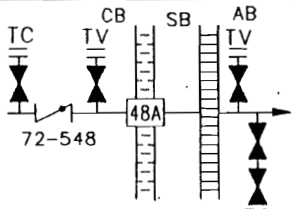
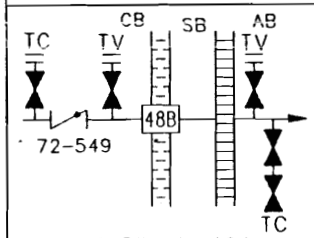
WA.TS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																		
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 L 727 AZ 293°30'	47W809-1	55	W	C	AD	TO RCP SEALS (62)	CB	563	–	CK	–	SA	–	–	–	O	C	C	–	–	N	N	A	N	MK28	
 L 727 AZ 292°	47W809-1	55	W	C	AD	TO RCP SEALS (62)	CB	560	–	CK	–	SA	–	–	–	O	C	C	–	–	N	N	A	N	MK30	
 L 727'6" AZ 281°30'	47W809-1	55	W	C	AD	FROM RCP SEALS (62)	CB AB CB	61 63 639	B A –	GA GA CK	MO MO –	AT AT SA	RM RM –	PA PA –	10.0 10.0 –	O O O	V V O	C C V	AI AI –	C C –	Y Y N	N N N	AC AC AC	N	MK37	

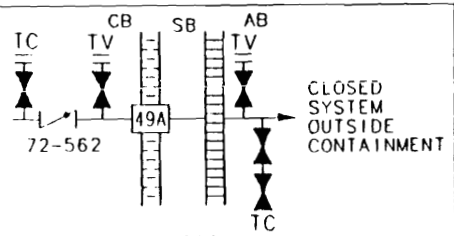
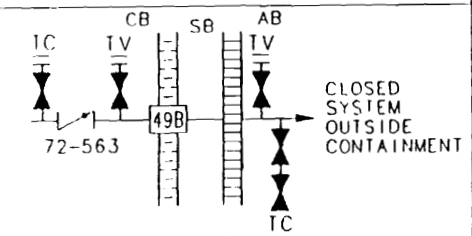
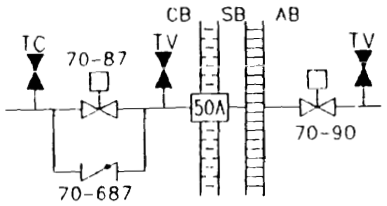
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS–TABLE 6.2.4–1 AMENDMENT 88

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 723 AZ 281°30'	47W830-1	56	N2	C	BD	RC DRAIN TK AND PRT TO VH (77)	CB AB AB	18 19 20	B A A	DI DI DI	AO AO AO	AT AT AT	RM RM RM	PA PA PA	10.0 10.0 10.0	O O O	O O O	C C C	C C C	C C C	Y Y Y	N N N	AC AC AC	N	AS45	
 EL 723 AZ 278°	47W830-1, 47W809-7	56	W	C	BD	RC DRAIN TK PUMP DISCHARGE (77/84)	CB AB AB	9 10 530	B A –	DI DI GL	AO AO M	AT AT LM	RM RM –	PA PA –	10.0 10.0 -	O O C	O O C	C C C	C C –	C C C	Y Y N	N N N	AC AC AC	N	AS46	18
EL 808'6" AZ 293° 	47W814-2	56	G	C	BD	GLYCOL SUPPLY (61)	CB AB CB	192 191 533	B A –	DI DI CK	AO AO –	AT AT SA	RM RM –	PA PA –	30.0 30.0 -	O O O	O O O	C C V	C C –	O O O	Y Y N	N N N	AC AC AC	N	MK25	8

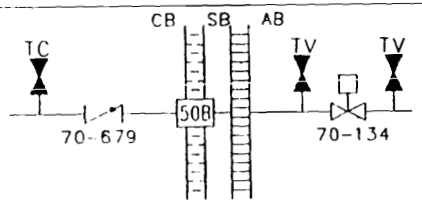
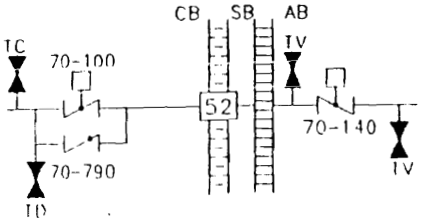
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 88

PENETRATION DATA							VALVE DATA																		
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	VALVE STATUS: SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 808'6" AZ 296°30'	47W814-2	56	G	C	BD	GLYCOL RETURN (61)	CB AB CB	194 193 680	B A –	DI DI CK	AO AO –	AT AT SA	RM RM –	PA PA –	30.0 30.0 –	O O O	O O O	C C V	C C –	O O O	Y Y N	N N N	AC AC AC	N	MK26	
 EL 855'8" AZ 301°30'	47W812-1	56	W	C	AD	CONT. SPRAY (72)	CB	548	–	CK	–	SA	–	–	–	C	C	V	–	–	N	Y	A	E	MK4	26
 EL 853'8" AZ 304°	47W812-1	56	W	C	AD	CONT. SPRAY (72)	CB	549	–	CK	–	SA	–	–	–	C	C	V	–	–	N	Y	A	E	MK3	26

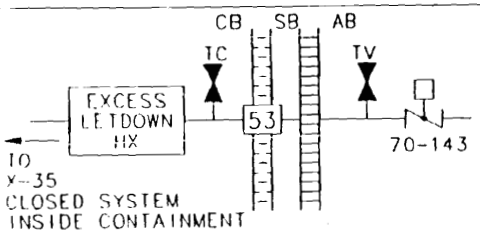
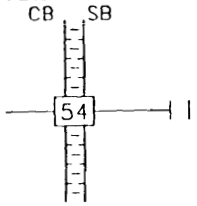
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																		
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 855'8" AZ 306°	47W812-1	56	W	C	AD	RHR SPRAY (72)	CB	562	–	CK	–	SA	–	–	–	C	C	V	–	–	N	Y	A	E	MK2	26
 EL 853'8" AZ 308°	47W812-1	56	W	C	AD	RHR SPRAY (72)	CB	563	–	CK	–	SA	–	–	–	C	C	V	–	–	N	Y	A	E	MK1	26
 EL 734'6" AZ 300°30'	47W859-3, -2	56	W	C	AD	RCP THERM BARRIER RETURN (70)	CB AB CB	87 90 687	B A –	GA GA CK	MO MO –	AT AT –	RM RM –	PB PB –	66.0 66.0 –	O O O	O O O	C C V	AI AI –	C C –	Y Y N	N N N	AC AC AC	N	MK16	8

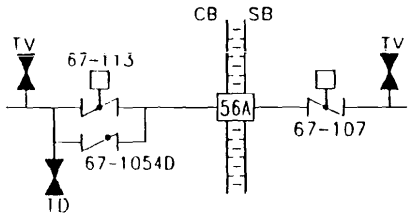
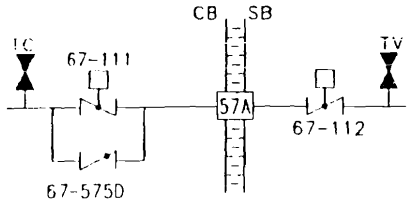
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS–TABLE 6.2.4–1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 734'6" AZ 299°30'	47W859-3, -2	56	W	C	AD	RCP THERM BARRIER SUPPLY (70)	CB AB	679 134	– B	CK GA	– MO	SA AT	– RM	– PB	– 66.0	O O	O O	C C	– Ai	– C	N Y	N N	AC AC	N	MK17	
X–51 EL 728'6" AZ 286°30'	48N406	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	
 EL 722'6" AZ 299°30'	47W859-2 -3	56	W	C	AD	CCS TO RCP COOLERS (70)	AB CB CB	140 100 790	B A –	BF BF CK	MO MO –	AT AT SA	RM RM –	PB PB –	66.0 66.0 –	O O O	O O O	C C V	Ai Ai –	C C –	Y Y N	N N N	AC AC AC	N	MK40	8

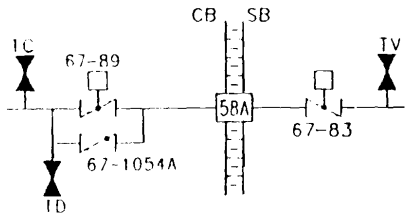
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 721'6" AZ 301°	47W859-2, 3	57	W	C	AD	CCS TO EXCESS LETDN HX (70)	AB	143	A	BF	MO	AT	RM	PA	66.0	V	C	C	AI	C	Y	N	AC	N	MK41	11
 EL 740 AZ 90°	72-4333-315	–	A	C	BC	THIMBLE RENEWAL	– SB AB	–	–	– BL BL	– M M	– LM LM	–	–	–	C	V	C	–	O	N	N	AB	N	MK72	16
X-55 EL 771'6" AZ 262°	48N406	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	

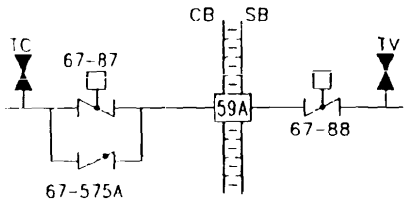
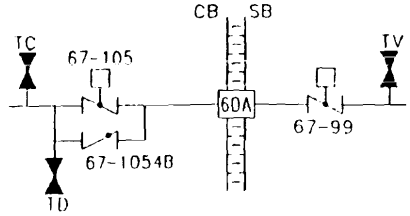
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																		
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 720 AZ 353°	47W845-3	56	W	C	AB DE	LWR CONT ERCW SUPPLY (67)	SB CB CB	107 113 1054D	A B –	BF BF CK	MO MO –	AT AT SA	RM RM –	PB PB –	66.0 66.0 –	O O O	O O O	C C V	AI AI –	C C –	Y Y N	N N N	AC AC AC	N	MK80	8
X-56B EL 720 AZ 355°30'	48N406	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	
 EL 720 AZ 351°30'	47W845-3	56	W	C	AB DE	LWR CONT ERCW RETURN (67)	CB SB CB	111 112 575D	B A –	BF BF CK	MO MO –	AT AT SA	RM RM –	PB PB –	66.0 66.0 –	O O O	O O O	C C V	AI AI –	C C –	Y Y N	N N N	AC AC AC	N	MK81	8

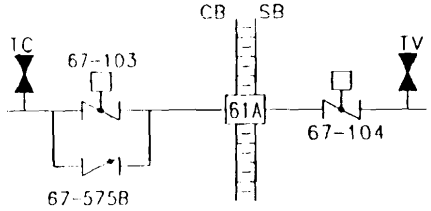
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
																			VALVE STATUS							
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	POST-ACCIDENT	POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
X-57B EL 720 AZ 354°15'	48N406	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	
 EL 720 AZ 7°	47W845-3	56	W	C	AB DE	LWR CONT ERCW SUPPLY (67)	CB SB CB	1054A 83 89	– B A	CK BF BF	– MO MO	SA AT AT	– RM RM	– PB PB	– 66.0 66.0	O O O	O O O	V C C	– AI AI	– C C	N Y Y	N N N	AC AC AC	N	MK79	
X-58B EL 720 AZ 13°	47W600-75	54	W	C	BD	RCS PRESSURE SENSOR (68)	–	–	–	–	–	–	–	–	–	O	O	O	–	–	N	N	A	E	MK126	28

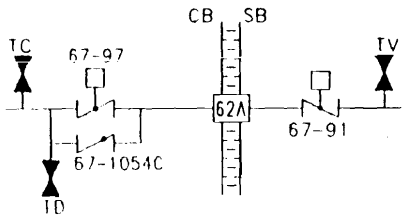
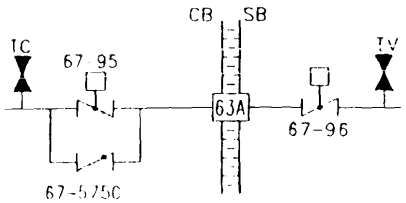
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG-NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 720 AZ 8'30'	47W845-3	56	W	C	AB DE	LWR CONT ERCW RETURN (67)	CB SB CB	87 88 575A	A B –	BF BF CK	MO MO –	AT AT SA	RM RM –	PB PB –	66.0 66.0 –	O O O	O O O	C C V	AI AI –	C C –	Y Y N	N N N	AC AC AC	N	MK78	8
X-59B EL 720 AZ 14'30'	48N406	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	
 EL 720 AZ 173'	47W845-3	56	W	C	AB DE	LWR CONT ERCW SUPPLY (67)	CB SB CB	1054B 99 105	– A B	CK BF BF	– MO MO	SA AT AT	– RM RM	– PB PB	– 66.0 66.0	O O O	O O O	V C C	– AI AI	– C C	N Y Y	N N N	AC AC AC	N	MK77	8

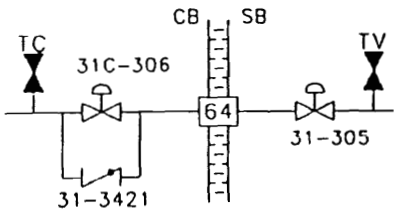
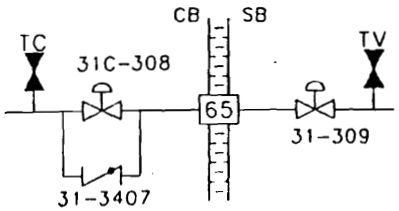
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
X-60B EL 720 AZ 174°15'	48N406	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	
 EL 720 AZ 171°30'	47W845-3 ..	56	W	C	AB DE	LWR CONT ERCW RETURN ... (67)	CB SB CB	103 104 575B	B A –	BF BF CK	MO MO –	AT AT SA	RM RM –	PB PB –	66.0 66.0 –	O O O	O O O	C C V	AI AI –	C C –	Y Y N	N N N	AC AC AC	N	MK76	8
X-61B EL 720 AZ 175°30'	48N406	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	

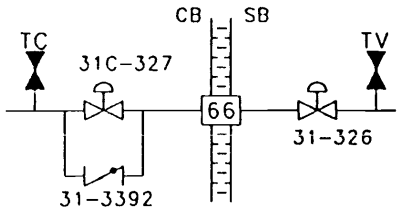
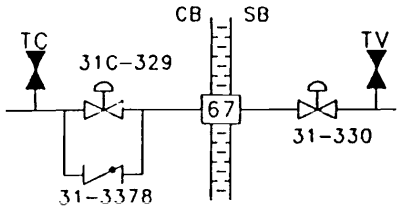
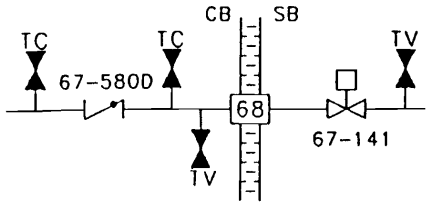
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 720 AZ 187°	47W845-3	56	W	C	AB DE	LWR CONT ERCW SUPPLY (67)	CB SB CB	1054C 91 97	– B A	CK BF BF	– MO MO	SA AT AT	– RM RM	– PB PB	– 66.0 66.0	O O O	O O O	V C C	– AI AI	– C C	N Y Y	N N N	AC AC AC	N	MK74	8
X-62B EL 720 AZ 193°	48N406	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	
 EL 720 AZ 189°30'	47W845-3	56	W	C	AB DE	LWR CONT ERCW RETURN (67)	CB SB CB	95 96 575C	A B –	BF BF CK	MO MO –	AT AT SA	RM RM –	PB PB –	66.0 66.0 –	O O O	O O O	C C V	AI AI –	C C –	Y Y N	N N N	AC AC AC	N	MK75	8

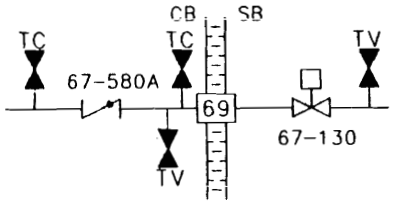
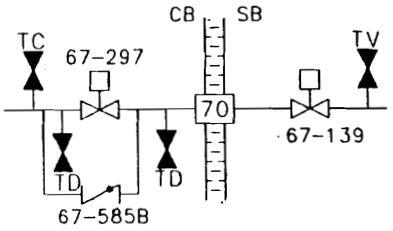
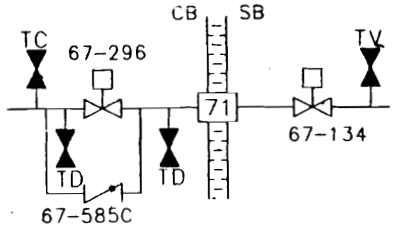
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 90

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTE
X-63B L 720 AZ 194°30'	48N406	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	
 737 AZ 65°	47W865-5	56	W	C	AB D	INST RM CHILL H2O RETURN (31)	CB SB CB	306 305 3421	A B –	GL GL CK	AO AO –	AT AT SA	RM RM –	PA PA –	10.0 10.0 –	O O O	O O O	C C V	C C –	C C –	Y Y N	N N N	AC AC AC	N	MK92	8
 738 AZ 65°	47W865-5	56	W	C	AB D	INST RM CHILL H2O SUPPLY (31)	CB SB CB	308 309 3407	A B –	GL GL CK	AO AO –	AT AT SA	RM RM –	PA PA –	10.0 10.0 –	O O O	O O O	C C V	C C –	C C –	Y Y N	N N N	AC AC AC	N	MK90	8

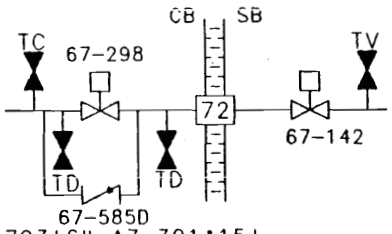
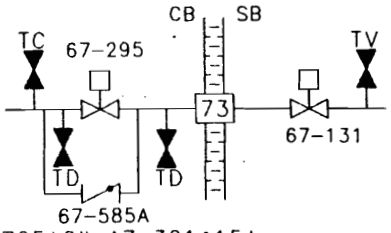
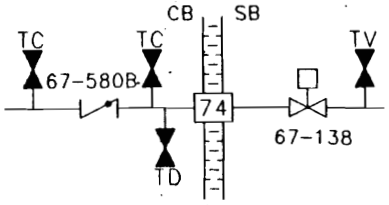
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 90

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	VALVE STATUS: NORMAL	VALVE STATUS: SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 L 737 AZ 104°	47W865-5	56	W	C	AB D	INST RM CHILL H2O RETURN (31)	CB SB CB	327 326 3392	B A –	GL GL CK	AO AO –	AT AT SA	RM RM –	PA PA –	10.0 10.0 –	O O O	O O O	C C V	C C –	C C O	Y Y N	N N N	AC AC AC	N	MK93	8
 L 738 AZ 104°	47W865-5	56	W	C	AB D	INST RM CHILL H2O SUPPLY (31)	CB SB CB	329 330 3378	B A –	GL GL CK	AO AO –	AT AT SA	RM RM –	PA PA –	10.0 10.0 –	O O O	O O O	C C V	C C –	C C O	Y Y N	N N N	AC AC AC	N	MK91	8
 L 794'6" AZ 301°15'	47W845-3	56	W	C	AB DE	UPPER CONT ERCW SUPPLY (67)	CB SB	580D 141	– B	CK BA	– MO	SA AT	– RM	– PB	– 66.0	– O	– O	– C	– AI	– C	N Y	N N	AC AC	N	MK88	

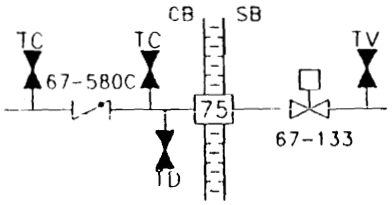
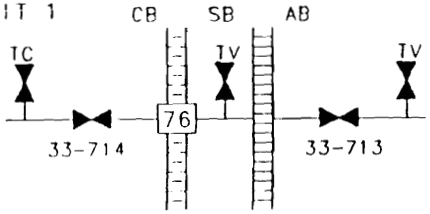
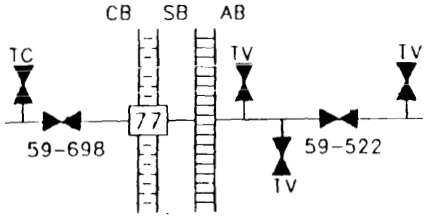
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 88

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 796'6" AZ 301°15'	47W845-3	56	W	C	AB DE	UPPER CONT ERCW SUPPLY (67)	CB SB	580A 130	– A	CK BA	– MO	SA AT	– RM	– PB	– 66.0	– O	– O	– C	– AI	– C	N Y	N N	AC AC	N	MK86	
 EL 798'6" AZ 301°15'	47W845-3	56	W	C	AB DE	UPPER CONT ERCW RETURN (67)	CB SB CB	297 139 585B	B A –	BA BA CK	MO MO –	AT AT SA	RM RM –	PB PB –	66.0 66.0 –	O O O	O O O	C C V	AI AI –	C C –	Y Y N	N N N	AC AC AC	N	MK84	8
 EL 800'6" AZ 301°15'	47W845-3	56	W	C	AB DE	UPPER CONT ERCW RETURN (67)	CB SB CB	296 134 585C	A B –	BA BA CK	MO MO –	AT AT SA	RM RM –	PB PB –	66.0 66.0 –	O O O	O O O	C C V	AI AI –	C C –	Y Y N	N N N	AC AC AC	N	MK82	8

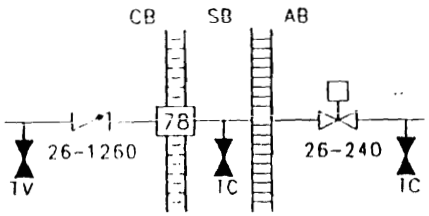
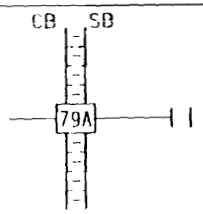
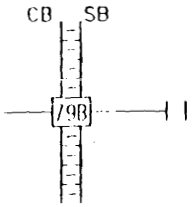
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 88

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 793'6" AZ 301°15'	47W845-3	56	W	C	AB DE	UPPER CONT ERCW RETURN (67)	CB SB CB	298 142 585D	B A –	BA BA CK	MO MO –	AT AT SA	RM RM –	PB PB –	66.0 66.0 –	O O O	O O O	C C V	AI AI –	C C –	Y Y N	N N N	AC AC AC	N	MK89	8
 EL 795'6" AZ 301°15'	47W845-3	56	W	C	AB DE	UPPER CONT ERCW RETURN (67)	CB SB CB	295 131 585A	A B –	BA BA CK	MO MO –	AT AT SA	RM RM –	PB PB –	66.0 66.0 –	O O O	O O O	C C V	AI AI –	C C –	Y Y N	N N N	AC AC AC	N	MK87	8
 EL 797'6" AZ 301°15'	47W845-3	56	W	C	AB DE	UPPER CONT ERCW SUPPLY (67)	CB SB	580B 138	– B	CK BA	– MO	SA AT	– RM	– PB	– 66.0	O O	O O	C C	– AI	– C	N Y	N N	AC AC	N	MK85	

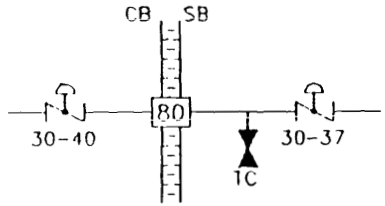
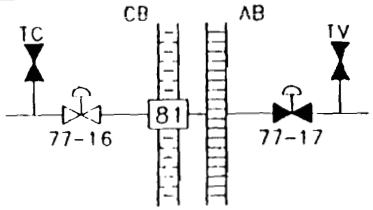
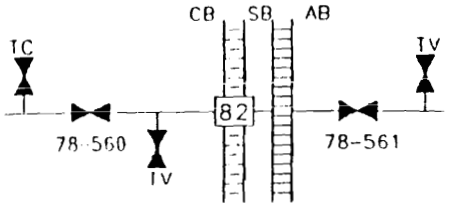
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 799'6" AZ 301°15'	47W845-3	56	W	C	AB DE	UPPER CONT ERCW SUPPLY (67)	CB SB	580C 133	– A	CK BA	– MO	SA AT	– RM	– PB	– 66.0	O O	O O	C C	– AI	– C	N Y	N N	AC AC	N	MK83	
 EL 711 AZ 300°	47W846-2	56	A	C	AD	SERVICE AIR (33)	CB AB	714 713	– –	DI DI	M M	LM LM	– –	– –	– –	C C	O O	C C	– –	C C	N N	N N	AC AC	N	MK97	
 EL 710'6" AZ 299°	47W856-1	56	W	C	AD	DEMIN WATER (59)	CB AB	698 522	– –	DI DI	M M	LM LM	– –	– –	– –	C C	O O	C C	– –	C C	N N	N N	AC AC	N	MK96	

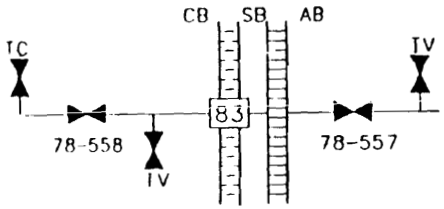
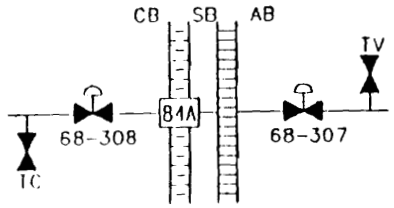
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 798'9" AZ 301°	47W850-9	56	A	C	AB D	FIRE PROTECTION (26)	CB AB	1260 240	– A	CK GA	– MO	SA AT	– LM	– PA	– 20.0	O O	O O	C C	– AI	– C	N Y	N N	AC AC	N	MK98	
 EL 808 AZ 289°	47W814-1 47W462-7	56	I	C	AB	ICE BLOWING (61)	SB			BL	M	LM	–	–	–	C	V	C	–	C	Y	N	AB	N	MK23	
 EL 809 AZ 290°	47W814-1 47W462-7	56	I	C	AB	NEGATIVE RETURN (61)	SB			BL	M	LM	–	–	–	C	V	C	–	C	N	Y	AB	N	MK24	

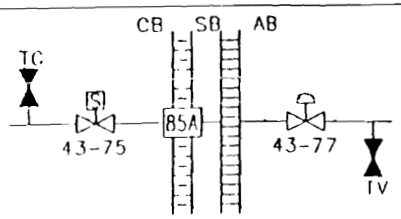
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																		
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 720 AZ 286°30'	47W866-1	56	A	C	AB CE	LWR COMP PRESS RELIEF (30)	CB SB	40 37	A B	BF BF	AO AO	AT AT	RM RM	CV CV	4.0 4.0	V V	C C	C C	C C	C C	Y Y	N N	AC AC	N	MK71	3,6,14
 EL 718 AZ 287°	47W830-1	56	A	C	AD	RC DR TK TO GAS ANALYZER (77)	CB AB	16 17	B A	DI DI	AO AO	AT AT	RM RM	PA PA	10.0 10.0	V V	O O	C C	C C	C C	Y Y	N N	AC AC	N	AS081	
 EL 718 AZ 282°30'	47W855-1	56	W	C	AB D	REFUEL CAV PRFCN PUMP SUCT (78)	CB AB	560 561	– –	DI DI	M M	LM LM	– –	– –	– –	C C	V V	C C	A1 A1	C C	N N	N N	AC AC	N	MK94	

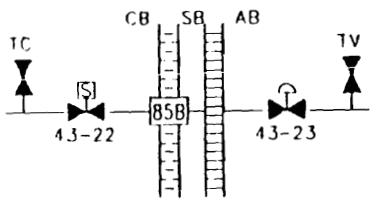
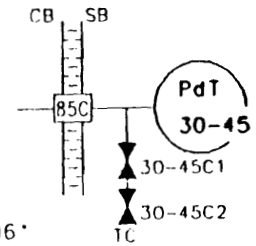
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 733 AZ 294°	47W855-1	56	W	C	AB D	REFUEL CAV PRFCN PUMP SUCTION (78)	CB AB	558 557	- -	DI DI	M M	LM LM	- -	- -	- -	C C	V V	C C	AI AI	C C	N N	N N	AC AC	N	MK95	
 EL 723 AZ 307°30'	47W625-8	56	N2	C	AD	P.R.T. TO GAS ANALYZER (68)	CB SB	308 307	B A	GL GL	AO AO	AT AT	RM RM	PA PA	10.0 10.0	V V	O O	C C	C C	C C	Y Y	N N	AC AC	N	MK99M	
X-84B EL 723 AZ 307°30'	47W600-292	-	W	C	BD	RVLIS (68)	-	-	-	-	-	-	-	-	-	O	O	O	-	-	N	N	A	E	MK101	21

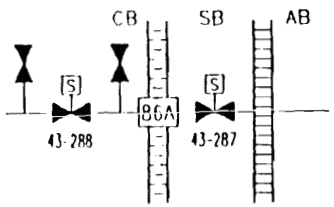
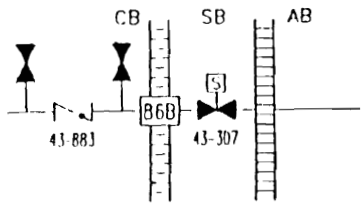
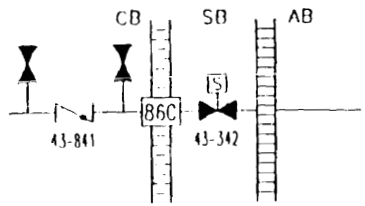
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																		
																		VALVE STATUS							
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	POST-ACCIDENT	POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
X-84C EL 723 AZ 307°30'	47W600-292	-	W	C	BD	RVLIS (68)	-	-	-	-	-	-	-	-	-	0	0	0	-	-	N	N	A	E	MK101	21
X-84D EL 723 AZ 307°30'	47W600-292	-	W	C	BD	RVLIS (68)	-	-	-	-	-	-	-	-	-	0	0	0	-	-	N	N	A	E	MK101	21
 EL 723 AZ 306°	47W625-7	56	W	H	AB D	EX LT DN HX TO BORON ANALYZER (43)	CB CB	75 77	B A	GL GL	SO AO	AT AT	RM RM	PA PA	5.0 5.0	V V	C C	C C	C C	C C	N N	N N	AC AC	N	MK100M	15

WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
																		VALVE STATUS								
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	POST-ACCIDENT	POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 723 AZ 306°	47W625-1	55	W	H	AB D	HOT LEG SAMPLE LOOPS 1 & 3 (43)	CB SB	22 23	B A	GL GL	SO AO	AT AT	RM RM	PA PA	10.0 10.0	V V	C C	C C	C C	C C	N N	N N	AC AC	N	MK100M	15
 EL 723 AZ 306°	47W600-89	–	A	C	B	dP SENSOR (30)	SB SB SB	SNSR. 45C1 45C2	– – –	– GL GL	– M M	– LM LM	– – –	– – –	– – –	O C C	O V V	O C C	– – –	– C C	– N N	N N N	A A –	E	–	12
X-85D EL 723 AZ 306°	47W331-2	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	

WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 721'6" AZ 307°30'	47W625-15	56	A	C	AB D	PAS CONT AIR INTK (43)	CB SB	288 287	A A	GL GL	SO SO	RM RM	LM LM	– –	– –	C C	C C	V V	C C	C C	Y Y	N N	AC AC	E	MK61	19
 EL 721'6" AZ 307°30'	47W625-15	56	A	C	AB D	PAS CONT AIR RTRN (43)	CB SB	883 307	– A	CK GL	– SO	SA RM	– LM	– –	– –	C C	C C	V V	– C	– C	N Y	N N	AC AC	E	MK33	19
 EL 721'6" AZ 307°30'	47W625-15	56	W	C	AB D	PAS CONT SUMP RTRN (43)	CB SB	841 342	– A	CK GL	– SO	SA RM	– LM	– –	– –	C C	C C	V V	– C	– C	N Y	N N	AC AC	E	MK54	19

WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
X-86D EL 721'6" AZ 307°30'	47W331-2	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	
X-87A EL 721'6" AZ 306°	47W331-2	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	
X-87B EL 721'6" AZ 306°	47W600-292 47W331-2	–	W	C	BD	RVLIS (68)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	N	N	A	E	–	21

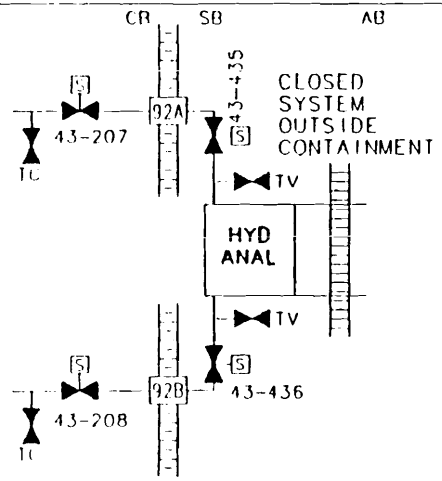
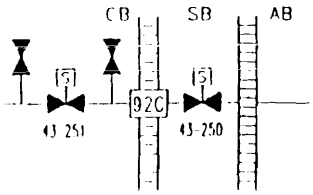
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
X-87C EL 721'6" AZ 306°	47W600-292 47W331-2	–	W	C	BD	RVLIS (68)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	N	N	A	E	MK102	21
X-87D EL 721'6" AZ 306°	47W600-292 47W331-2	–	W	C	BD	RVLIS (68)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	N	N	A	E	MK102	21
X-88 EL 733 AZ 277°30'	48N406	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	

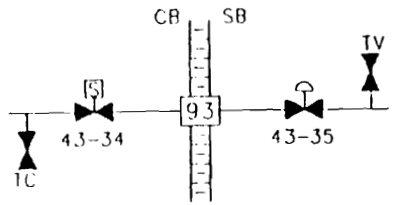
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 90

PENETRATION DATA							VALVE DATA																		
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTE
X-89 EL 732 AZ 278°30'	48N406	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	
UNIT 1 CB SB TC TV 90 32-313 32-102 32-308 EL 729'6" AZ 280°30' TV	47W848-1	56	A	C	AB D	CONTROL AIR TR-B (32)	CB SB SB	313 102 308	– B –	CK GL GA	– AO M	SA AT LM	– RM –	– PB –	– 10.0 –	O O C	O O C	C C C	– C AI	– C C	N Y N	N N N	AC AC AC	N	MK105	10
UNIT 1 CB SB TC TV 91 32-303 32-80 32-298 EL 723'6" AZ 291° TV	47W848-1	56	A	C	AB D	CONTROL AIR TR-A (32)	CB SB SB	303 80 298	– A –	CK GL GA	– AO M	SA AT LM	– RM –	– PB –	– 10.0 –	O O C	O O C	C C C	– C AI	– C C	N Y N	N N N	AC AC AC	N	MK56	10

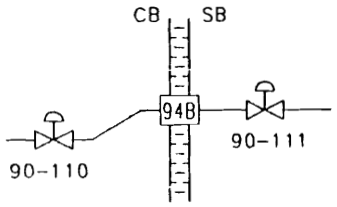
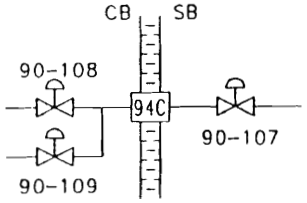
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 723'6" AZ 290°	47W625-11	56	A	C	BD	H2 ANALYZER TR-B (43)	CB	207	B	GL	SO	RM	LM	–	–	C	C	O	C	O	Y	N	AC	E	MK-33	15,20
							SB	435	B	GL	SO	RM	LM	–	–	C	C	O	C	O	Y	N	AC	E	MK-61	
	47W625-11	56	A	C	BD	H2 ANALYZER TR-B (43)	CB	208	B	GL	SO	RM	LM	–	–	C	C	O	C	O	Y	N	AC	E	MK-33	15,20
							SB	436	B	GL	SO	RM	LM	–	–	C	C	O	C	O	Y	N	AC	E	MK-61	
 EL 723'6" AZ 290°	47W625-15	55	W	H	AB D	PAS HOT LEG 1 TR-A (43)	CB	251	A	GL	SO	RM	LM	–	–	C	C	V	C	C	Y	N	AC	E	MK34	19
							SB	250	A	GL	SO	RM	LM	–	–	C	C	V	C	C	Y	N	AC			

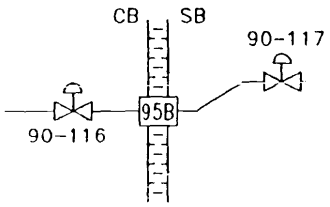
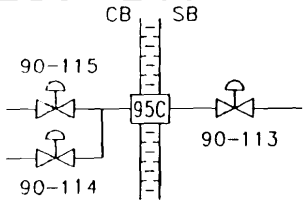
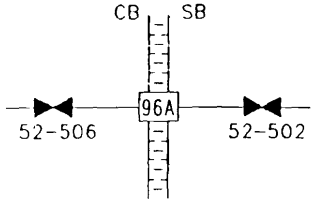
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
X-92D EL 723'6" AZ 290°	47W331-3	-	-	-	-	SPARE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	-	-	
 EL 723'6" AZ 289°	47W625-2	56	W	C	AB D	ACCUM SAMPLE (43)	CB SB	34 35	B A	GL GL	SO AO	AT AT	RM RM	PA PA	5.0 5.0	V V	C C	C C	C C	C C	N N	N N	AC AC	N	MK58	
X-94A EL 741 AZ 294°	47W600-105 48N406	-	A	C	-	SPARE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	-	-	

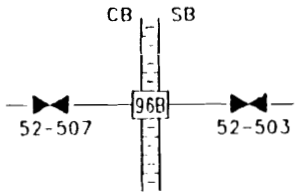
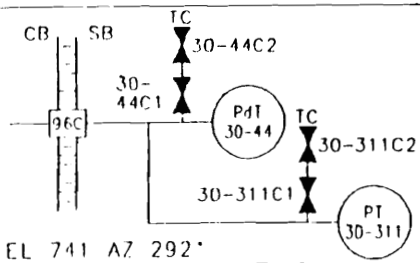
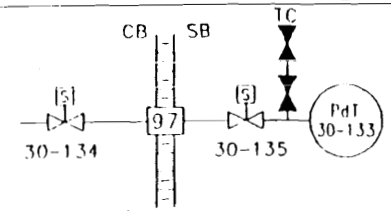
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS–TABLE 6.2.4–1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 741 AZ 294°	47W600-105	56	A	C	AB D	LOWER COMP AIR MON INTAKE (90)	CB SB	110 111	B A	GL GL	AO AO	AT AT	RM RM	CV CV	5.0 5.0	O O	O O	C C	C C	C C	Y Y	N N	AC AC	N	MK59M	
 EL 741 AZ 294°	47W600-105	56	A	C	AB D	LOWER COMP AIR MON RETURN (90)	CB SB CB	108 107 109	B A B	GL GL GL	AO AO AO	AT AT AT	RM RM RM	CV CV CV	5.0 5.0 5.0	O O O	O O O	C C C	C C C	C C C	Y Y Y	N N N	AC AC AC	N	MK59M	
X–95A EL 741 AZ 293°	47W600 105	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	

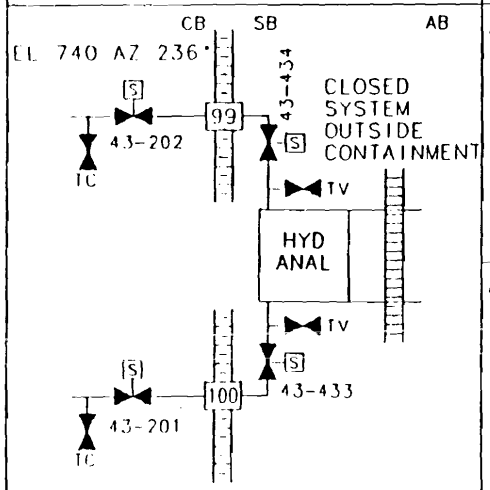
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																		
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 741 AZ 293°	47W600-105	56	A	C	AB D	UPPER COMP AIR MON INTAKE (90)	CB SB	116 117	B A	GL GL	AO AO	AT AT	RM RM	CV CV	5.0 5.0	O O	O O	C C	C C	C C	Y Y	N N	AC AC	N	MK60M	
 EL 741 AZ 293°	47W600-105	56	A	C	AB D	UPPER COMP AIR MON RETURN (90)	CB SB CB	114 113 115	B A B	GL GL GL	AO AO AO	AT AT AT	RM RM RM	CV CV CV	5.0 5.0 5.0	O O O	O O O	C C C	C C C	O C O	Y Y Y	N N N	AC AC AC	N	MK60M	
 EL 741 AZ 292°	47W331-3	56	A	C	B	ILRT SENSOR LINE (52)	CB SB	506 502	– –	GL GL	M M	LM LM	– –	– –	– –	C C	V V	C C	– –	O O	N N	N N	AC AC	N	–	

WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
																		VALVE STATUS								
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	POST-ACCIDENT	POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 741 AZ 292°	47W331-3	56	A	C	B	ILRT SENSOR LINE (52)	CB SB	507 503	– –	GL GL	M M	LM LM	– –	– –	– –	C C	V V	C C	– –	O O	N N	N N	AC AC	N	–	
 EL 741 AZ 292°	47W600-89 47W331-3	–	A	C	B	dP SENSOR (30)	SB SB SB SB SB	SNSR. 44C1 44C2 311C1 311C2	– – – – –	– GL GL GL GL	– M M M M	– LM LM LM LM	– – – – –	– – – – –	– – – – –	O C C C C	O V V V V	O C C C C	– – – – –	– C C C C	– N N N N	N N N N N	A A – A –	E	–	12,13
 EL 741 AZ 291°	47W866-1	56	A	C	B	dP SENSOR (30)	CB SB	134 135	B A	GL GL	SO SO	AT AT	RM RM	PA PA	10.0 10.0	O O	O O	C C	C C	C C	Y Y	N N	AC AC	N	–	

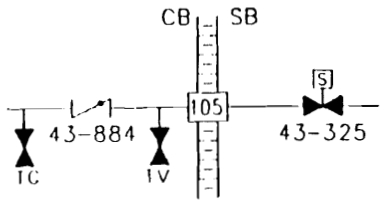
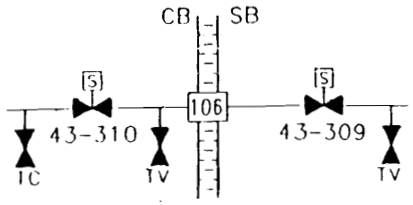
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
X-98 EL 741 AZ 290°	48N406	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	
 EL 740 AZ 236°	47W625-11	56	A	C	BD	HYDROGEN ANALYZER TR-A (43)	CB SB	202 434	A A	GL GL	SO SO	RM RM	LM LM	– –	– –	C C	C C	O O	C C	O O	Y Y	N N	AC AC	E E	MK-54 –	15
EL 740 AZ 237°	47W625-11	56	A	C	BD	HYDROGEN ANALYZER TR-A (43)	CB SB	201 433	A A	GL GL	SO SO	RM RM	LM LM	– –	– –	C C	C C	O O	C C	O O	Y Y	N N	AC AC	E E	MK-54 –	15

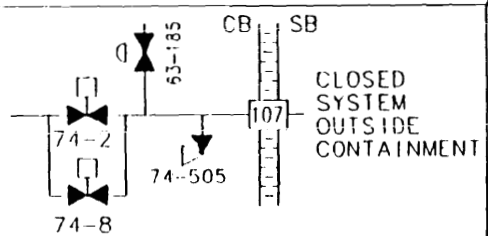
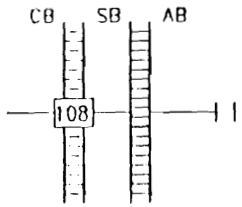
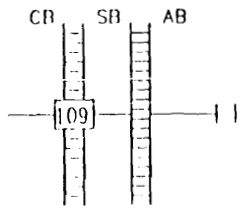
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
X-101 EL 723'6" AZ 288°	48N406	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	
X-102 EL 728 AZ 236°	48N406	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	
X-103 EL 723'6" AZ 287°	48N406	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	

WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTE
X-104 EL 728 AZ 237°	48N406	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	
 EL 722'6" AZ 288°	47W625-15	56	A	C	AB D	PAS CONT AIR RTRN TR-B (43)	CB SB	884 325	– B	CK GL	– SO	SA RM	– LM	– –	– –	C C	C C	V V	– C	C C	N Y	N N	AC AC	E	MK33	19
 EL 727 AZ 236°	47W625-15	56	W	H	AB D	PAS HOT LEG 3 TR-B (43)	CB SB	310 309	B B	GL GI	SO SO	RM RM	LM LM	– –	– –	C C	C C	V V	C C	C C	Y Y	N N	AC AC	E	MK48	19

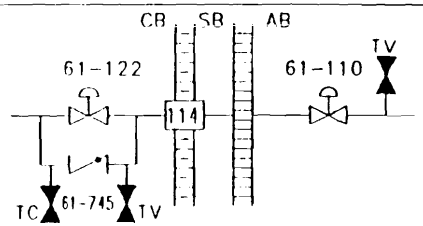
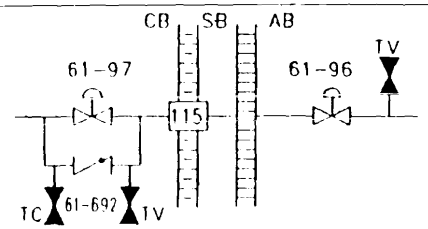
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS–TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
 EL 717'11.5" AZ 300°30'	47W810-1	55	W	H	BD	RHR SUPPLY TO PUMPS (74,63)	CB CB CB CB	2 8 505 185	B B – A	GA GA RV GL	MO MO – AO	RM RM – RM	LM LM – LM	– – – PA	– – – 10.0	C C C V	V V C V	V V V C	AI AI – C	C C C C	Y Y N N	N N N N	A A – A	E	MK38	
 EL 711'6" AZ 218°	47W435-18-22	–	A	C	AB D	MAINT PORT	AB	–	–	BL	M	LM	–	–	–	C	V	C	–	C	N	N	AB	N	AS108	
 EL 711'6" AZ 222°	47W435-18-22	–	A	C	AB D	MAINT. PORT	AB	–	–	BL	M	LM	–	–	–	C	V	C	–	C	N	N	AB	N	AS109	

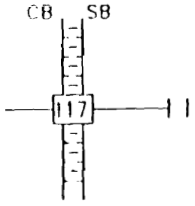
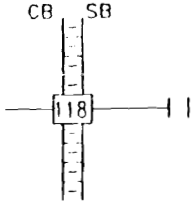
WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																				
																			VALVE STATUS								
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	POST-ACCIDENT	POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
X-110 EL 711'6" AZ 209°	48N406 47W435-22	–	–	–	B	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	MK32	
X-111 EL 845'9" AZ 90°	48N406	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	
X-112 EL 845'9" AZ 270°	48N406	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	–	

WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
X-113 EL 740 AZ 216°	48N406	-	-	-	-	SPARE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	-	-	
 EL 775 AZ 300°	47W814-2	56	G	C	AB D	GLYCOL FLOOR COOLING (61)	CB AB CB	122 110 745	B A -	DI DI CK	AO AO -	AT AT SA	RM RM -	PA PA -	30.0 30.0 -	O O O	O O O	C C V	C C -	O C O	Y Y N	Y Y Y	AC AC AC	N	MK110	8
 EL 771'6" AZ 300°	47W814-2	56	G	C	AB D	GLYCOL FLOOR COOLING (61)	CB AB CB	97 96 692	B A -	DI DI CK	AO AO -	AT AT SA	RM RM -	PA PA -	30.0 30.0 -	O O O	O O O	C C V	C C -	O C O	Y Y N	Y Y Y	AC AC AC	N	MK111	8

WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																		
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
X-116 EL 760 AZ 300°	48N406	–	–	–	–	SPARE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	A	–	MK7	
 EL 758 AZ 300°	47W301-1	–	A	C	AB	MAINT. PORT	SB	–	–	BL	M	LM	–	–	–	C	V	C	–	C	N	N	AB	N	MK8	
 EL 708'6" AZ 209°	72-4333-318 47W862-1	–	W	C	AB C	LAYUP WATER TREATMENT (41) AND ANNULUS FLOOD MODE DRAIN	CB SB	–	–	BL BL	M M	LM LM	–	–	–	C	O	C	–	O	N	N	AB AB	N	MK18	27

WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

PENETRATION DATA							VALVE DATA																			
DETAIL	DWG NUMBER	GEN DES CRITERION	PROCESS FLUID	FLUID STATE	POSS LEAK PATHS	SYSTEM NUMBER AND PENETRATION DESCRIPTION	VALVE LOCATION	VALVE NUMBER	ESF POWER TRAIN	VALVE TYPE	ACTUATOR	PRI ACT MODE	SEC ACT MODE	ISOLATION SIGNAL	STROKE TIME	NORMAL	SHUTDOWN	VALVE STATUS: POST-ACCIDENT	VALVE STATUS: POWER FAILURE	ILRT	POS IND IN MCR	ESF	APP J TEST	ESSENTIAL/NON-ESS	SHIELD BLDG PENETRATION	NOTES
X-119 EL 844'5" AZ 90°	48N406	-	-	-	-	SPARE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	-	-	
X-120 EL 844'5" AZ 270°	48N406	-	-	-	-	SPARE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	-	-	

WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

ABBREVIATIONS FOR TABLE

VALVE TYPE

GL = GLOBE

GA = GATE

BF = BUTTERFLY

CK = CHECK

A = ANGLE

RV = RELIEF

DI = DIAPHRAGM

BL = BLIND FLANGE

TC = TEST CONNECTION

TV = TEST VENT

WV = WAFER VALVE

D = DOOR

BA = BALL

ACTUATORS

AO = AIR OPERATED

MO = MOTOR OPERATED

SO = SOLENOID OPERATED

ILRT

C = CLOSED

O = OPEN

ISOLATION SIGNAL

CV = CONTAINMENT VENT ISOLATION

PA = PHASE A

PB = PHASE B

PR = PUMP RUN

CP = CONTAINMENT PRESSURE

SI = SAFETY INFECTION

AFIS = AUXILIARY FEEDWATER ISOLATION SIGNAL

MS = MAIN STEAM ISOLATION SIGNAL

FW = FEEDWATER ISOLATION SIGNAL

WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

ABBREVIATIONS FOR TABLE

ACTUATION MODE

RM = REMOTE MANUAL

LM = LOCAL MANUAL

SA = SELF ACTUATOR

AT = AUTO TRIP

AO = AUTO OPEN

VALVE POSITIONS

O = OPEN

C = CLOSED

V = VARIES

AI = AS IS

LC = LOCKED CLOSED

PROCESS FLUID STATE

C = COLD

H = HOT

POSSIBLE LEAKAGE PATHS

SEE FSAR SECTION 6.2.4.3.1

FLUID

A = AIR

W = WATER

S = STEAM

N = NITROGEN

I = ICE

BUILDING STRUCTURES

CB = CONTAINMENT BUILDING

SB = SHIELD BUILDING

AB = AUXILIARY BUILDING

WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

1. A DASH IS PRINTED IN DATA SPACES THAT DO NOT APPLY TO THE PENETRATION BEING DESCRIBED.

2. AN M AT THE END OF A CONTAINMENT OR SHIELD BUILDING PENETRATION NUMBER INDICATES THE PENETRATION HAS MORE THAN ONE LINE GOING THROUGH IT.

3. PIPING SYSTEMS ISOLATED BY A CONTAINMENT VENTILATION (CV) SIGNAL ARE ALSO ISOLATED BY A PHASE A SIGNAL.

4. PIPING INSIDE THE CONTAINMENT VESSEL HAS FIVE BRANCHES. IDENTICAL ISOLATION VALVES ARE INSTALLED IN EACH BRANCH. ONE VALVE IS NORMALLY OPEN. THREE OTHER VALVES ARE NORMALLY CLOSED AND ALSO RECEIVE PHASE A SIGNAL. THE FIFTH VALVE IS A RELIEF VALVE WHICH RELIEVES INTO CONTAINMENT.

5. THE PIPING IS JOINED BY A LINE LEADING TO THE NITROGEN SUPPLY OUTSIDE OF THE SHIELD BUILDING. THIS LINE IS ISOLATED BY AN AIR OPERATED GATE VALVE WITH PHASE A ISOLATION.

6. DUCTING OUTSIDE THE SHIELD BUILDING HAS TWO BRANCHES. IDENTICAL SECONDARY CONTAINMENT ISOLATION VALVES ARE INSTALLED IN EACH BRANCH.

7. PIPING OUTSIDE OF THE SHIELD BUILDING HAS NINE BRANCHES. EACH LINE IS ISOLATED BY A RELIEF VALVE.

8. INSIDE THE CONTAINMENT VESSEL A LINE IS PROVIDED FOR PRESSURE RELIEF OF THE VOLUME BETWEEN THE ISOLATION VALVES. THIS LINE IS ISOLATED BY A CHECK VALVE.

9. THE PIPING IS JOINED BY A LINE USED FOR S.I.S. TESTING OUTSIDE OF THE SHIELD BUILDING. THIS LINE IS ISOLATED BY AN AIR OPERATED GLOBE VALVE WITH REMOTE MANUAL ACTUATION FROM THE MAIN CONTROL ROOM.

10. THE PIPING HAS A BYPASS LINE ATTACHED TO IT INSIDE THE ANNULUS. THIS BYPASS LINE IS ISOLATED BY A LOCKED CLOSED GATE VALVE WITH LOCAL MANUAL OPERATION.

11. ISOLATION INSIDE CONTAINMENT IS ACCOMPLISHED BY A CLOSED SYSTEM.

12. THE DP SENSORS ARE CLOSED SYSTEMS OUTSIDE OF CONTAINMENT THAT ARE ATTACHED DIRECTLY TO THE CONTAINMENT. NO IN LINE ISOLATION VALVES ARE EMPLOYED FOR THESE SENSORS REFER TO SECTION 6.2.4.3.

WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

13. POST ACCIDENT MONITORING SYSTEM (PAMS) WIDE RANGE PRESSURE SENSORS ALSO MONITOR PRESSURE THROUGH THIS PENETRATION.

14. THE SECONDARY CONTAINMENT ISOLATION VALVE(S), WHICH REPRESENT AN ADDITIONAL BOUNDARY OUTSIDE CONTAINMENT IN HVAC SYSTEMS, ARE USED TO PREVENT BYPASS LEAKAGE FROM THE ANNULUS.

15. ISOLATION VALVES CAN BE MANUALLY ACTUATED ELECTRICALLY OR PNEUMATICALLY.

16. TWO BLIND FLANGES ARE EMPLOYED IN THE ANNULUS, ONE ACTS AS A PRIMARY CONTAINMENT ISOLATION BARRIER AND OTHER AS A SECONDARY CONTAINMENT ISOLATION BARRIER. THE PRIMARY AND SECONDARY CONTAINMENT PENETRATIONS ARE NOT CONNECTED EXCEPT FOR THE TYPE A TEST PRESSURIZATION.

17. OUTSIDE CONTAINMENT, RELIEF VALVES RELEASE INTO THIS LINE IN THE EVENT OF SIS OVERPRESSURE, THUS THE SYSTEM IS ALMOST ALWAYS CLOSED, BUT COULD OPEN FOR PRESSURE RELIEF ANYTIME SIS IS ON.

18. OUTSIDE CONTAINMENT, A ONE INCH LINE TIES IN BETWEEN THE OUTER ISOLATION VALVE AND PRIMARY CONTAINMENT. THIS LINE IS ISOLATED BY A MANUALLY LOCKED CLOSED CONTAINMENT ISOLATION VALVE.

19. THE CONTAINMENT ISOLATION VALVES IN THIS LINE REQUIRE SIMULTANEOUS OPEN SIGNALS FROM TWO SEPARATE SWITCHES IN ORDER TO OPEN. ONE SWITCH IS LOCATED IN THE MAIN CONTROL ROOM AND THE OTHER IS LOCATED IN THE REMOTE SAMPLING STATION.

20. THIS PENETRATION CONTAINS BOTH THE INTAKE AND RETURN LINES FOR A HYDROGEN ANALYZER. THESE LINES FORM A CLOSED SYSTEM OUTSIDE CONTAINMENT AND EACH HAS A CONTAINMENT ISOLATION VALVE INSIDE AND OUTSIDE CONTAINMENT.

21. THIS LINE TRANSMITS PRESSURE FROM THE PRIMARY COOLANT SYSTEM TO PRESSURE INSTRUMENTATION FOR DETERMINING THE REACTOR VESSEL FLUID LEVEL. THE LINE IS FLUID FILLED AND DOUBLE DIAPHRAGMED TO PREVENT COMMUNICATION BETWEEN THE PRIMARY SYSTEM FLUID AND THE AUXILIARY BUILDING. NO PRIMARY SYSTEM FLUID TRAVELS THROUGH THE PENETRATION SINCE THE INNER DIAPHRAGM IS LOCATED NEAR THE REACTOR VESSEL. SINCE DOUBLE DIAPHRAGMS ARE EMPLOYED FOR CONTAINMENT ISOLATION, NO CONTAINMENT ISOLATION VALVES ARE USED.

22. THIS LINE JOINS THE SECONDARY SIDE OF THE STEAM GENERATOR(S) INSIDE CONTAINMENT AND IS THEREFORE CONSIDERED A CLOSED SYSTEM INSIDE CONTAINMENT. THE ISOLATION VALVES WHICH EXIST OUTBOARD OF CONTAINMENT ARE NOT LEAKRATE TESTED DUE TO FLOODING OF THE STEAM GENERATORS POST LOCA.

WATTS BAR NUCLEAR PLANT CONTAINMENT PENETRATIONS AND BARRIERS-TABLE 6.2.4-1 AMENDMENT 85

23. BETWEEN PRIMARY CONTAINMENT AND THE OUTER ISOLATION VALVE IN THIS LINE, AN AUXILIARY FEEDWATER LINE ADJOINS. THE AUXILIARY FEEDWATER LINE HAS ISOLATION VALVES WHICH ARE ISOLATED IN THE SAME MANNER AS THE AUXILIARY FEEDWATER ISOLATION VALVES LISTED FOR X-40A AND X-40B.

24. ONE WET LAYUP LINE TIES INTO THIS LINE INBOARD OF THE OUTER ISOLATION VALVE. THE LAYUP LINE IS ISOLATED WITH A MANUAL CONTAINMENT ISOLATION VALVE WHICH IS LOCKED CLOSED PRIOR TO CRITICALITY.

25. AZIMUTH INFORMATION FOR THESE LINES CAN BE FOUND IN CHICAGO BRIDGE & IRON CO. STEEL CONTAINMENT VESSEL DATA PACKAGE (RIMS #B48850425301).

26. NO TYPE C LEAKAGE RATE TEST IS PERFORMED ON THIS LINE, BUT A WATER INVENTORY LEAKAGE RATE TEST IS PERFORMED ON THE MOV LOCATED OUTSIDE CONTAINMENT. THIS WATER LEAKAGE TEST ASSURES THAT THE WATER LEG, LOCATED IMMEDIATELY INBOARD OF THE MOV, WILL MAINTAIN A SUFFICIENT INVENTORY TO MAINTAIN A PRESSURE OF AT LEAST 1.1 TIMES THE MAXIMUM CALCULATED CONTAINMENT ACCIDENT PRESSURE ON THE MOV FOR 30 DAYS AFTER AN ACCIDENT.

27. PENETRATION X-118 IS OPENED BY REMOVING THE BLIND FLANGE IN THE ANNULUS TO ALLOW THE WATER WHICH HAS COLLECTED IN THE ANNULUS FROM LEAKAGE THROUGH THE PENETRATIONS OR SEEPAGE THROUGH THE CONCRETE TO DRAIN THE REACTOR BUILDING FLOOR AND EQUIPMENT DRAIN SUMP.

28. THIS LINE TRANSMITS PRESSURE FROM THE PRIMARY COOLANT SYSTEM TO PRESSURE INSTRUMENTATION. THE LINE IS FLUID FILLED AND DOUBLE DIAPHRAGMED TO PREVENT COMMUNICATION BETWEEN THE PRIMARY SYSTEM FLUID AND THE AUXILIARY BUILDING. NO PRIMARY SYSTEM FLUID TRAVELS THROUGH THE PENETRATION SINCE THE INNER DIAPHRAGM IS LOCATED NEAR THE REACTOR VESSEL. SINCE DOUBLE DIAPHRAGMS ARE EMPLOYED FOR CONTAINMENT ISOLATION, NO CONTAINMENT ISOLATION VALVES ARE USED.