

CONTAINMENT PENETRATION	PENETRATION SIZE	LOCATION		LINE SIZE	QTY.	LINE DESCRIPTION	REMARKS	TYPE "B" TESTABLE PENETR.	TYPE "C" TESTABLE ISOLATION VALVES (INBOARD, OUTBOARD)	CONTAINMENT PENETRATION	PENETRATION SIZE	LOCATION		LINE SIZE	QTY.	LINE DESCRIPTION	REMARKS	TYPE "B" TESTABLE PENETR.	TYPE "C" TESTABLE ISOLATION VALVES (INBOARD, OUTBOARD)
		ELEVATION	AZIMUTH									ELEVATION	AZIMUTH						
X-1A	10"-0" I.D.	907'-3"	135'	-	1	EQUIPMENT HATCH	SEE SECTION 33 DWG. 4262 (REF. ONLY)	DOUBLE O-RING		X-36	6"	950'-0"	175'	3"	1	H <sub>2</sub> O <sub>2</sub> MONITORING	SAMPLE LINES (SEE NOTE 4 & 6)	IF MODIFIED	
X-1B	10"-0" I.D.	907'-3"	315'	-	1	EQUIPMENT HATCH	SEE SECTION 33 DWG. 4262 (REF. ONLY)	DOUBLE O-RING		X-37A	3'-9"W x 2'-6"H	918'-10"	75'	1"	32	31 CRD WATER INSERT, 1 SPARE	SEE DETAIL 28 & 30, DWG. 4262 (REF. ONLY)		
X-2	8'-6" I.D.	907'-11"	0'	-	1	PERSONNEL ACCESS AIR LOCK	SEE SECTION 21 DWG. 4262 (REF. ONLY)	DOUBLE O-RING		X-37B	4'-7"W x 2'-6"H	918'-10"	105'	1"	38	37 CRD WATER INSERT, 1 SPARE	SEE DETAIL 28 & 30, DWG. 4262 (REF. ONLY)		
X-4	24" I.D.	DRYWELL HEAD	135'	5'-10" I.D.	1	DRYWELL HEAD ACCESS HATCH	10'-0" R FROM Q DRYWELL HEAD	DOUBLE O-RING		X-37C	4'-7"W x 2'-6"H	918'-10"	255'	1"	39	38 CRD WATER INSERT, CRD MINI PURGE	SEE DETAIL 28 & 30, DWG. 4262 (REF. ONLY)		CRD-14CV, CRD-13CV
X-5A	6'-11 1/2"	892'-5"	25'	5'-10" I.D.	1	VENT LINE DRYWELL TO TORUS	TYPE "A" TESTED			X-37D	3'-9"W x 2'-6"H	918'-10"	285'	1"	32	31 CRD WATER INSERT, 1 SPARE	SEE DETAIL 28 & 30, DWG. 4262 (REF. ONLY)		
X-5B	6'-11 1/2"	892'-5"	70'	5'-10" I.D.	1	VENT LINE DRYWELL TO TORUS	TYPE "A" TESTED			X-38A	3'-9"W x 2'-6"H	918'-10"	75'	1"	32	31 CRD WATER WITHDRAWAL, 1 SPARE	SEE DETAIL 28 & 30, DWG. 4262 (REF. ONLY)		
X-5C	6'-11 1/2"	892'-5"	115'	5'-10" I.D.	1	VENT LINE DRYWELL TO TORUS	TYPE "A" TESTED			X-38B	4'-7"W x 2'-6"H	918'-10"	105'	1"	38	37 CRD WATER WITHDRAWAL, 1 SPARE	SEE DETAIL 28 & 30, DWG. 4262 (REF. ONLY)		
X-5D	6'-11 1/2"	892'-5"	160'	5'-10" I.D.	1	VENT LINE DRYWELL TO TORUS	TYPE "A" TESTED			X-38C	4'-7"W x 2'-6"H	918'-10"	255'	1"	39	38 CRD WATER WITHDRAWAL, CRD MINI PURGE	SEE DETAIL 28 & 30, DWG. 4262 (REF. ONLY)		CRD-16CV, CRD-15CV
X-5E	6'-11 1/2"	892'-5"	200'	5'-10" I.D.	1	VENT LINE DRYWELL TO TORUS	TYPE "A" TESTED			X-38D	3'-9"W x 2'-6"H	918'-10"	285'	1"	32	31 CRD WATER WITHDRAWAL, 1 SPARE	SEE DETAIL 28 & 30, DWG. 4262 (REF. ONLY)		
X-5F	6'-11 1/2"	892'-5"	245'	5'-10" I.D.	1	VENT LINE DRYWELL TO TORUS	TYPE "A" TESTED			X-39A	12"	934'-6"	40'	12"	1	RHR DRYWELL SPRAY LOOP A	(SEE NOTE 1 & 7)		RHR-MO31A
X-5G	6'-11 1/2"	892'-5"	290'	5'-10" I.D.	1	VENT LINE DRYWELL TO TORUS	TYPE "A" TESTED			X-39B	12"	920'-10"	299'	12"	1	RHR DRYWELL SPRAY LOOP B	(SEE NOTE 1, 5 & 7)		RHR-MO31B FOR RHR
X-5H	6'-11 1/2"	892'-5"	335'	5'-10" I.D.	1	VENT LINE DRYWELL TO TORUS	TYPE "A" TESTED												PC-1311MV, PC-1312MV FOR SBNI
X-6	24"	905'-3"	37'	-	1	CRD REMOVAL HATCH		DOUBLE O-RING		X-40A	10"	920'-10"	49'	1"	7	X-40A(g-f) JET PUMP INSTR. TO BCV	SEE SECTION 6-6		
X-7A	42"	908'-4"	160'	24"	1	MS TO TURBINE	SEE SECTION 4-4	BELLOWS	MS-A080A, MS-A086A	X-40A	10"	920'-10"	49'	1"	7	X-40A COUPLING PC PRESSURE INSTR.	(SEE NOTE 4 & 6)		
X-7B	42"	908'-4"	175'	24"	1	MS TO TURBINE	SEE SECTION 4-4	BELLOWS	MS-A080B, MS-A086B	X-40B	10"	920'-10"	53'	1"	7	X-40B(g-f) JET PUMP INSTR. TO BCV	SEE SECTION 6-6		
X-7C	42"	908'-4"	185'	24"	1	MS TO TURBINE	SEE SECTION 4-4	BELLOWS	MS-A080C, MS-A086C	X-40B	10"	920'-10"	53'	1"	7	X-40B COUPLING PC PRESSURE INSTR.	(SEE NOTE 4 & 6)		
X-7D	42"	908'-4"	200'	24"	1	MS TO TURBINE	SEE SECTION 4-4	BELLOWS	MS-A080D, MS-A086D	X-40C	10"	919'-1"	239'	1"	7	X-40C(g-f) JET PUMP INSTR. TO BCV	SEE SECTION 7-7		
X-8	18"	904'-10"	180'	3"	1	CONDENSATE DRAIN (MAIN STEAM)	MS-MO74, MS-MO77			X-40C	10"	919'-1"	239'	1"	7	X-40C COUPLING PC PRESSURE INSTR.	(SEE NOTE 4 & 6)		
X-9A	34"	913'-7"	170'	18"	1	FW WITH RWCU AND RCIC INJECTION LINES	SEE SECTION 4-4	BELLOWS	RF-16CV, RF-15CV FOR FW RF-16CV, RCIC-26CV FOR RCIC RF-16CV, RWCU-15CV FOR RWCU	X-40D	10"	919'-1"	244'	1"	7	X-40D(g-f) JET PUMP INSTR. TO BCV	SEE SECTION 7-7		
X-9B	34"	913'-7"	190'	18"	1	FW WITH HPCI INJECTION LINES	SEE SECTION 4-4	BELLOWS	RF-14CV, RF-13CV FOR RWCU RF-14CV, HPCI-29CV FOR HPCI	X-41	6"	967'-6"	345'	1"	1	REACTOR WATER SAMPLE			RR-741AV, RR-740AV
X-10	18"	920'-10"	190'	3"	1	RCIC STEAM				X-42	4"	962'-6"	150'	1 1/2"	1	SLC INJECTION			SLC-13CV, SLC-12CV
X-11	26"	906'-6"	335'	10"	1	HPCI STEAM	SEE SECTION 5-5, PITCH DOWN 5' FROM FACE OF DRYWELL			X-43	18"	920'-6"	115'	4"	1	RR PUMP FLUSHING & ILRT TEST CONN.	SEE SECTION 7-7	DOUBLE O-RING	
X-12	36"	907'-0"	20'	20"	1	SHUTDOWN SUPPLY TO RHR PUMPS	SEE SECTION 5-5 (SEE NOTE 7)		RHR-MO17	X-44	18"	920'-6"	115'	4"	1	RR PUMP FLUSHING & ILRT TEST CONN.	SEE SECTION 7-7	DOUBLE O-RING	
X-13A	42"	912'-2 7/16"	25'	24"	1	RHR INJECTION	(SEE NOTE 7)		RHR-MO25A	X-45	12"	920'-6"	125'	4"	1	RHR PUMP FLUSHING & ILRT TEST CONN.	SEE SECTION 7-7, TYPE "A" TESTED		
X-13B	42"	912'-2 7/16"	340'	24"	1	RHR INJECTION	(SEE NOTE 7)		RHR-MO25B	X-45	12"	920'-10 1/2"	245'	2-1 1/2" 1-2 1/2"	6	X-45(A,B,E & F) SPARE	SEE SECTION 7-7, TYPE "A" TESTED		
X-14	22"	946'-0"	20'	6"	1	RWCU FROM RECIRC PUMPS			RWCU-MO15, RWCU-MO18	X-46	10"	920'-10"	155'	1"	6	X-45(D) SOV AIR EXHAUST TO DRYWELL	(SEE NOTE 1)		RMV-12AV, RMV-13AV
X-15	20"	947'-6"	340'	-	1	SPARE	TYPE "A" TESTED			X-47	10"	920'-10"	160'	1"	6	X-45(E) SOV AIR EXHAUST TO DRYWELL	(SEE NOTE 1)		PC-35CV, PC-36CV
X-16A	26"	946'-3"	100'	10"	1	CS A PUMP DISCHARGE	(SEE NOTE 7)		CS-MO12A	X-48	10"	898'-9"	166'	10"	1	X-46(A-F) SPARE	SEE SECTION 7-7, TYPE "A" TESTED		
X-16B	26"	946'-3"	260'	10"	1	CS B PUMP DISCHARGE	(SEE NOTE 7)		CS-MO12B	X-49	10"	918'-6"	55'	1"	6	X-47(A,C-F) SPARE	SEE SECTION 7-7, TYPE "A" TESTED		
X-17	22"	897'-6"	337'	6"	1	SPARE	TYPE "A" TESTED			X-50	10"	920'-10"	235'	1"	6	X-47(B) INSTRUMENT LINE TO CV OR BCV	(SEE NOTE 6)		
X-18	6"	898'-9"	32'	3"	1	DRYWELL EQUIPMENT DRAIN PUMP DISCHARGE	(SEE NOTE 1)		RW-A094, RW-A095	X-51	10"	919'-1"	235'	1"	6	X-49(A,B & E,F) SPARE	SEE SECTION 6-6, TYPE "A" TESTED		
X-19	4"	898'-9"	28'	3"	1	DRYWELL FLOOR DRAIN PUMP DISCHARGE	(SEE NOTE 1)		RW-A082, RW-A083	X-52	10"	920'-10"	45'	1"	6	X-49(C & D) ELECTRICAL PEN.	SEE SECTION 7-7	ELEC. PENETR.	
X-20	8"	920'-10"	55'	4"	1	DRYWELL DEMINERALIZED WATER SUPPLY	SEE SECTION 6-6		DW-219, DW-133	X-53	6"	911'-0"	42'	6"	1	X-50(A,B) ELECTRICAL PEN.	SEE SECTION 7-7	ELEC. PENETR.	
X-21	3"	922'-6"	235'	1"	1	SERVICE AIR	SEE SECTION 7-7 (SEE NOTE 1)		SA-647, SA-648	X-54	10"	920'-10"	235'	1"	6	X-50(C,D) SPARE	TYPE "A" TESTED		
X-22	3"	922'-6"	232'	1"	1	INSTRUMENT AIR	SEE SECTION 7-7 (SEE NOTE 1)		IA-65CV, IA-78CV	X-55	10"	920'-10"	45'	1"	6	X-50(E,F) INSTR. LINE TO CV OR BCV	SEE SECTION 7-7		
X-23	12"	946'-0"	350'	8"	1	CLOSED COOLING WATER DRYWELL SUPPLY	(SEE NOTE 2)		REC-702MV	X-56	10"	920'-10"	45'	1"	6	X-51(A) INSTRUMENT LINE TO BCV	SEE SECTION 7-7		
X-24	12"	946'-0"	10'	8"	1	CLOSED COOLING WATER DRYWELL RETURN	(SEE NOTE 2)		REC-709MV	X-57	10"	920'-10"	45'	1"	6	X-51(B) SOV TO DRYWELL AIR EXHAUST	TYPE "A" TESTED		
X-25	20"	896'-0"	235'	20"	1	VENT TO DRYWELL	(SEE NOTE 1 & 5)	DOUBLE O-RING	PC-232MV, PC-238AV FOR PURGE & VENT PC-1306MV, PC-1305MV FOR SBNI	X-58	10"	920'-10"	45'	1"	6	X-51(C,D) SPARE	TYPE "A" TESTED		
X-26	20"	966'-6"	157'	20"	1	VENT FROM DRYWELL (PC PURGE AND VENT)	SEE DWG. GE 11703303 SHT. 5 (REF. ONLY) (SEE NOTE 1, 4 & 6)	DOUBLE O-RING	PC-231MV, PC-246AV FOR LARGE BORE SBT PC-306MV, PC-1310MV FOR SMALL BORE SBT	X-59	10"	920'-10"	45'	1"	6	X-52(A-D) 1" INSTR. LINE TO CV OR BCV	SEE SECTION 6-6		
X-27	10"	918'-6"	55'	1"	6	X-27(A-D) 1" INSTRUMENT TO BCV	SEE SECTION 6-6			X-100A	12"	919'-5"	5'	12"	1	X-52(E,F) SPARE	TYPE "A" TESTED		
X-28	10"	946'-0"	38'	1"	6	X-28(A-E) 1" INSTRUMENT TO BCV	TYPE "A" TESTED			X-100B	12"	918'-6"	40'	12"	1	LOW VOLTAGE INSTR. & CONTROL	SEE SECTION 7-7	ELEC. PENETR.	
X-29	10"	946'-0"	235'	1"	6	X-28(F) FLANGE LEAK DETECTION	TYPE "A" TESTED			X-100C	12"	918'-6"	49'	12"	1	SPARE	SEE SECTION 6-6, TYPE "A" TESTED		
X-30	10"	911'-6"	265'	1"	6	X-29(A-D) 1" INSTRUMENT TO BCV	SEE SECTION 3-3, SEE DWG. GE 11703303 SHT. 4 (REF. ONLY)		PC-33CV, PC-34CV (SEE NOTE 1)	X-100D	12"	918'-6"	53'	12"	1	SPARE	SEE SECTION 6-6, TYPE "A" TESTED		
X-31	10"	898'-9"	55'	1"	6	X-29(E) IA TO RR-741AV	SEE SECTION 4 & 6			X-100E	12"	920'-10"	225'	12"	1	NEUTRON MONITORING	SEE SECTION 7-7	ELEC. PENETR.	
X-32	10"	898'-9"	58'	1"	6	X-29(F) DRYWELL PRESSURE INDICATION	(SEE NOTE 4 & 6)			X-100F	12"	919'-1"	221'	12"	1	NEUTRON MONITORING	SEE SECTION 7-7	ELEC. PENETR.	
X-33	10"	898'-9"	65'	1"	6	X-30(A-D) 1" INSTRUMENT TO BCV	SEE SECTION 1-1			X-100G	12"	920'-10"	218'	12"	1	LOW VOLTAGE INSTR. & CONTROL	SEE SECTION 7-7	ELEC. PENETR.	
X-34	10"	911'-6"	260'	1"	6	X-30(E) IA TO NBI-737AV	(SEE NOTE 1)		NBI-559, NBI-560	X-100H	12"	919'-10"	215'	12"	1	LOW VOLTAGE INSTR. & CONTROL	SEE SECTION 7-7	ELEC. PENETR.	
X-35A	1 1/2"	900'-11"	206'	3/8"	1	X-30(F) IA TO MS-739AV	(SEE NOTE 1)		NBI-561, NBI-562	X-101A	12"	920'-10"	20'	12"	1	MEDIUM VOLTAGE POWER	SEE SECTION 6-6	ELEC. PENETR.	
X-35B	1 1/2"	900'-11"	210'	3/8"	1	X-31(A-D) INSTRUMENT TO CV OR BCV	SEE SECTION 2-2			X-101B	12"	919'-5"	24'	12"	1	NEUTRON MONITORING	SEE SECTION 6-6	ELEC. PENETR.	
X-35C	1 1/2"	900'-11"	214'	3/8"	1	X-32(A-F) INSTRUMENT TO CV OR BCV	SEE SECTION 2-2			X-101C	12"	920'-10"	28'	12"	1	MEDIUM VOLTAGE POWER	SEE SECTION 6-6	ELEC. PENETR.	
X-35D	1 1/2"	900'-11"	218'	3/8"	1	X-33(A-D) INSTRUMENT TO CV OR BCV	SEE SECTION 2-2			X-101D	12"	920'-10"	335'	12"	1	MEDIUM VOLTAGE POWER	SEE SECTION 7-7	ELEC. PENETR.	
X-35E	1 1/2"	900'-11"	222'	3/8"	1	X-33(E) IA TO MS-738AV	(SEE NOTE 1)			X-101E	12"	920'-10"	337'	12"	1	LOW VOLTAGE INSTR. & CONTROL	SEE SECTION 7-7	ELEC. PENETR.	
						X-33(F) IA TO NBI-736AV	(SEE NOTE 1)			X-101F	12"	920'-10"	340'	12"	1	MEDIUM VOLTAGE POWER	SEE SECTION 7-7	ELEC. PENETR.	
						X-34(A-D) INSTRUMENT TO CV OR BCV	SEE SECTION 1-1			X-102	12"	920'-10"	3'	12"	1	LOW VOLTAGE INSTR. & CONTROL	SEE SECTION 7-7	ELEC. PENETR.	
						X-34(E-F) SPARE	TYPE "A" TESTED			X-103	12"	919'-1"	223'	12"	1	NEUTRON MONITORING	SEE SECTION 7-7	ELEC. PENETR.	
										X-104A	12"	920'-10"	215'	12"	1	CONTROL ROD POSITION INDICATOR	SEE SECTION 7-7	ELEC. PENETR.	
										X-104B	12"	919'-1"	218'	12"	1	CONTROL ROD POSITION INDICATOR	SEE SECTION 7-7	ELEC. PENETR.	
										X-104C	12"	920'-10"	220'	12"	1	SPARE	SEE SECTION 7-7, TYPE "A" TESTED		
										X-104D	12"	919'-5"	350'	12"	1	CONTROL ROD POSITION INDICATOR	SEE SECTION 7-7	ELEC. PENETR.	
										X-104E	12"	920'-10"	355'	12"	1	CONTROL ROD POSITION INDICATOR	SEE SECTION 7-7</		