

### VALVE NUMBERING SYSTEM ABBREVIATIONS

SYSTEM LETTER	SYSTEM DESCRIPTION
AFW OR V2	AUXILIARY FEED WATER
AS OR V7	AUXILIARY STEAM
C OR V5	CONDENSATE
CAR OR V8	CONDENSER AIR REMOVAL
CC	COMPONENT COOLING
CF OR V3	CHEMICAL FEED
CVC	CHEMICAL AND VOLUME CONTROL
CW OR V8	CIRCULATING WATER
DG-AC	DIESEL GEN. AIR COOLANT
DG-AD OR V8	DIESEL GEN. AIR DRYER
DG-AS OR V8	DIESEL GEN. STARTING AIR
DG-JC	DIESEL GEN. JACKET COOLANT
DG-FD OR V8	DIESEL GEN. FUEL OIL
DW	DEMINERALIZED WATER
EH	TURBINE ELECTRO-HYDRAULIC CONTROL
ES OR V4	EXTRACTION STEAM
FO	FUEL OIL
FP OR V18	FIRE PROTECTION
FW OR V2	FEED WATER
GS	GLAND SEAL STEAM
HV OR V4	HEATER DRAINS & VENTS
H <sub>2</sub>	HYDROGEN SUPPLY
IA OR V6	INSTRUMENT AIR
INC	INCORE INSTRUMENTATION
ISW	ISOLATION VALVE SEAL WATER
LD OR V7	TURBINE LUBE OIL
MD	MISCELLANEOUS DRAINS
MS OR V1	MAIN AND REHEAT STEAM
N <sub>2</sub>	NITROGEN SUPPLY
PAS	POST ACCIDENT SAMPLING
PASS	NEW POST ACCIDENT SAMPLE SYSTEM
PP	PENETRATION PRESSURIZATION
PS	PRIMARY SAMPLING
PW OR V3	PRIMARY WATER
RC	REACTOR COOLANT
RHR	RESIDUAL HEAT REMOVAL
SA OR V6	STATION AIR
SDM	STEAM DUMP NITROGEN
SFPC	SPENT FUEL PIT COOLING
SGB OR V1	STEAM GEN. BLOWDOWN
SI	SAFETY INJECTION AND CONTAINMENT SPRAY
SO	HYDROGEN SEAL OIL
SS	SAMPLING SYSTEM
SW OR V6	SERVICE WATER
V2	CONTAINMENT VENT AND PURGE
VCT	CONTAINMENT SAMPLING & POST ACCIDENT VENTING
WD	WASTE DISPOSAL
WW	WASTE WATER

### MISC. ABBREVIATIONS

—	ATMOSPHERE
D.	LOCAL DRAIN
D.H.	DRAIN HEADER
E.C.C.	EMERGENCY COOLING CONNECTION
F.A.I.	FAIL AS IS
F.C.	FAIL CLOSED
F.O.	FAIL OPEN
H.I.C.	HAND INDICATING CONTROL
H.P.	HIGH PRESSURE
H.S.C.	HAND SPEED CONTROL
I.M.B.	INSIDE MISSILE BARRIER AND/OR SECONDARY SHELDING
I.R.C.	INSIDE REACTOR CONTAINMENT
L.C.	LOCKED CLOSED
L.O.	LOCKED OPEN
L.P.	LOW PRESSURE
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
O.M.B.	OUTSIDE MISSILE BARRIER
O.R.C.	OUTSIDE REACTOR CONTAINMENT
Ⓟ	CONTAINMENT ISOLATION TRIP SIGNAL PHASE "A" (SIGNAL OR MANUAL)
P.-NO.	ITEM NUMBER OF PIPE WITHIN SLEEVE AT CONTAINMENT BUILDING PENETRATION
R.R.	VALVE WITH REACH ROD
Ⓢ	SAFETY INJECTION ACTUATION SIGNAL

### MISC. ABBREVIATIONS CONT.

S.C.	SEALED CLOSED
S.O.	SEALED OPEN
Ⓢ	CONTAINMENT ISOLATION TRIP SIGNAL PHASE "A" (SIGNAL OR MANUAL)
V.H.	VENT HEADER
C.O.	CHAIN OPERATED VALVE

### PIPING SYSTEM ABBREVIATIONS

AC	AUXILIARY COOLANT (RESIDUAL HEAT REMOVAL, SPENT FUEL PIT COOLING & COMPONENT COOLING WATER)
AFW	AUXILIARY BOILER FEED WATER
B	BLOWDOWN
C	CONDENSATE
CF	CHEMICAL FEED
CH	CHEMICAL AND VOLUME CONTROL
CR	COLD REHEAT
CW	CIRCULATING, SERVICE, AND COOLING WATER
DW	DEEP WELL WATER
DW	DEEP WELL WATER
DW	DEEP WELL WATER
ES	EXTRACTION STEAM
FO	FUEL OIL
FP	FIRE PROTECTION
FW	FEED WATER
HD	HEATER DRAIN
HR	HOT REHEAT
IA	INSTRUMENT AIR
LO	LUBE OIL
MD	MISCELLANEOUS DRAINS
MP	WATER TREATMENT ACID & CAUSTIC
MS	MAIN STEAM
RC	REACTOR COOLANT
S	AUXILIARY STEAM
SA	STATION AIR
SD	AUXILIARY STEAM CONDENSATE
SI	SAFETY INJECTION
SL	SAMPLING LINE
SW	SERVICE WATER
V	VENTS
WD	WASTE DISPOSAL
WW	WASTE WATER

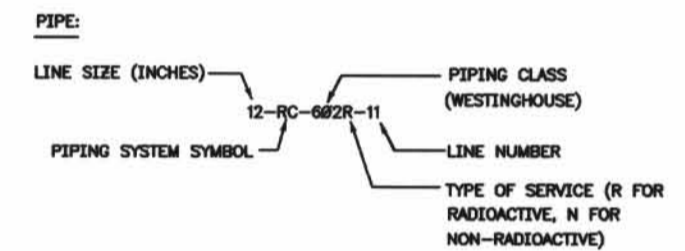
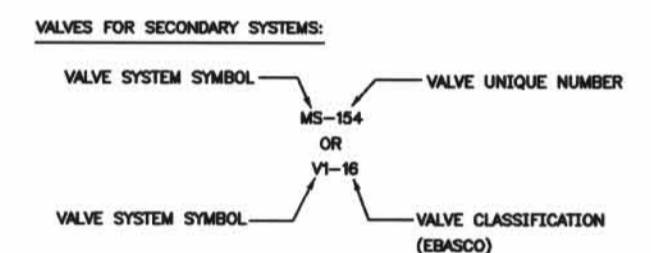
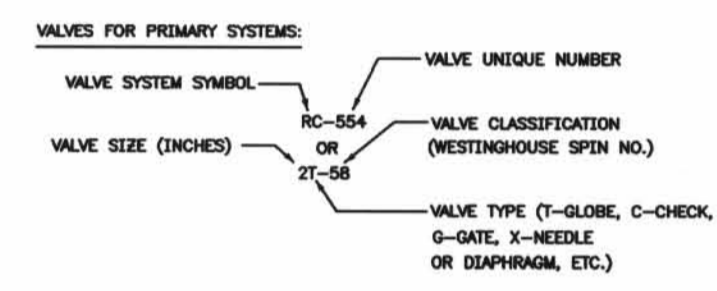
### EQUIPMENT ABBREVIATIONS

ACC	AIR COOLED CONDENSING UNIT
BET	BORON INJECTION TANK
CC	COOLING COIL
CCST	COMPONENT COOLING SURGE TANK
CROM	CONTROL ROD DRIVE MECHANISM
RS	REACTOR SUMP
CST	CONDENSATE STORAGE TANK
CV	CONTAINMENT VESSEL
EAC	EVAPORATOR AIR COOLER
EDH	ELECTRIC DUCT HEATER
ELH	ELECTRIC UNIT HEATER
GA	GAS ANALYZER
GSC	GLAND STEAM CONDENSER
HC	HEATING COIL
HP	HEAT PUMP
HMA	UNITARY AIR CONTAINER
HNE	AIR HANDLING EXHAUST UNIT
HWH	AIR RECIRCULATION COOLING UNIT
HVS	AIR HANDLING SUPPLY UNIT
HXC	HEAT EXCHANGER
HY	FIRE HYDRANT
D-NO.	DAMPER NUMBER
MSR	MOISTURE SEPARATOR REHEATER
L-NO.	LOUVER NUMBER
PRT	PRESSURIZER RELIEF TANK
PWST	PRIMARY WATER STORAGE TANK
RCOT	REACTOR COOLANT DRAIN TANK
RCP	REACTOR COOLANT PUMP
RMS	RADIATION MONITOR
RWST	REFUELING WATER STORAGE TANK
SRST	SPENT RESIN STORAGE TANK
SUH	STEAM UNIT HEATER
VCT	VOLUME CONTROL TANK
WHT	WASTE HOLDUP TANK

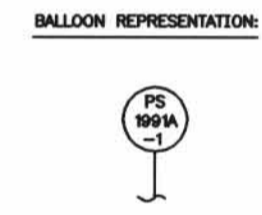
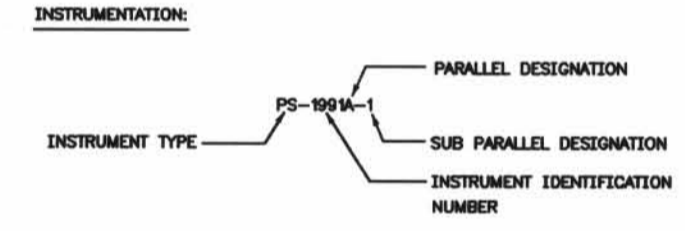
### SPECIALTIES ABBREVIATIONS

EJ	EXPANSION JOINTS
S	STRAINERS
SV	SAFETY VALVE
T	TRAPS

### VALVE, PIPING, AND INSTRUMENT NUMBERING



NOTE: FOR SECONDARY SYSTEMS, PIPING CLASS AND TYPE OF SERVICE ARE OMITTED.



### EQUIPMENT ABBREVIATIONS CONTINUED

A.F.W.P.	AUXILIARY FEEDWATER PUMPS
B.A.	BORIC ACID
B.H.X.	BLOWDOWN HEAT EXCHANGER
C.C.B.	CONDENSATE CATCH BASIN
C.D.	CATION DEMINERALIZER
C.D.P.	CAUSTIC DILUTION PUMP
D.T.	DEIONIZATION TANK
D.W.P.	DEEP WELL PUMP
D.W.T.	DEAERATOR WATER TANK
D.W.T.P.	DEAERATOR WATER TRANSFER PUMPS
E.D.G.	EMERGENCY DIESEL GENERATOR
M.B.D.	MIXED BED DEMINERALIZER
M.D.C.T.	MISCELLANEOUS DRAINS COLLECTING TANKS
N.W.T.	NEUTRALIZER WATER TANK
S.F.P.F.	SPENT FUEL PIT FILTER
S.G.D.P.	STEAM GENERATOR DRAIN PUMP
S.G.D.T.	STEAM GENERATOR DRAIN TANK
S.T.	SURGE TANK
C.V.P.	CONDENSER VACUUM PUMPS

### INSTRUMENTATION TAG NUMBER DESIGNATIONS

MEASURED VARIABLE (FIRST LETTER)	INSTRUMENT FUNCTION	CONTROLLING (SECOND AND THIRD LETTER)										MEASURING (SECOND AND THIRD LETTER)													
		NON-INDICATING	CONTROL VALVE	INDICATING	RECORDING	ALARM	PRIMARY ELEMENT	OBSERVATION GLASS	INDICATOR	INDICATING SWITCH	SIGNAL MODIFIER SYMBOLS/ACTIONS	RECORDING	NON-INDICATING SWITCH	TRANSMITTER	WELL	TEST POINT	INDICATING TRANSMITTER	PRESSURE	POWER SUPPLY						
ANALYSIS	A	AC	AD	AE	AF	AG	AH	AI	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AV	AW	AX	AY	AZ			
CONDUCTIVITY	C	CC	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR	CS	CT	CU	CV	CW	CX	CY	CZ
DIFF. PRESSURE	DP	DC	DD	DE	DF	DG	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	DS	DT	DU	DV	DW	DX	DY	DZ
VOLTAGE	E	EC	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP	EQ	ER	ES	ET	EU	EV	EW	EX	EY	EZ
FLOW	F	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP	FQ	FR	FS	FT	FU	FV	FW	FX	FY	FZ
HAND (ACTUATED)	H	HC	HD	HE	HF	HG	HH	HI	HJ	HK	HL	HM	HN	HO	HP	HQ	HR	HS	HT	HU	HV	HW	HX	HY	HZ
CURRENT	I	IC	ID	IE	IF	IG	IH	II	IJ	IK	IL	IM	IN	IO	IP	IQ	IR	IS	IT	IU	IV	IW	IX	IY	IZ
LEVEL	L	LC	LD	LE	LF	LG	LH	LI	LJ	LK	LL	LM	LN	LO	LP	LQ	LR	LS	LT	LU	LV	LW	LX	LY	LZ
PRESSURE	P	PC	PD	PE	PF	PG	PH	PI	PJ	PK	PL	PM	PN	PO	PP	PQ	PR	PS	PT	PU	PV	PW	PX	PY	PZ
HYDROGEN ION CONC.	PH	PHC	PHD	PHI	PHJ	PHK	PHL	PHM	PHN	PHO	PHP	PHQ	PHR	PHS	PHT	PHU	PHV	PHW	PHX	PHY	PHZ				
POWER	Q	QC	QD	QE	QF	QG	QH	QI	QJ	QK	QL	QM	QN	QO	QP	QQ	QR	QS	QT	QU	QV	QW	QX	QY	QZ
RADIATION	R	RC	RD	RE	RF	RG	RH	RI	RJ	RK	RL	RM	RN	RO	RP	RQ	RR	RS	RT	RU	RV	RW	RX	RY	RZ
SPEED	S	SC	SD	SE	SF	SG	SH	SI	SJ	SK	SL	SM	SN	SO	SP	SQ	SR	SS	ST	SU	SV	SW	SX	SY	SZ
TEMP. DIFFERENTIAL	T	TC	TD	TE	TF	TG	TH	TI	TJ	TK	TL	TM	TN	TO	TP	TQ	TR	TS	TT	TU	TV	TW	TX	TY	TZ
VIBRATION	V	VC	VD	VE	VF	VG	VH	VI	VJ	VK	VL	VM	VN	VO	VP	VQ	VR	VS	VT	VU	VV	VW	VX	VY	VZ
WEIGHT OR FORCE	W	WC	WD	WE	WF	WG	WH	WI	WJ	WK	WL	WM	WN	WO	WP	WQ	WR	WS	WT	WU	WV	WW	WX	WY	WZ
MISCELLANEOUS	Y	YC	YD	YE	YF	YG	YH	YI	YJ	YK	YL	YM	YN	YO	YP	YQ	YR	YS	YT	YU	YV	YW	YX	YY	YZ

### REFERENCES:

- AUXILIARY PIPING SHOP AND FIELD FABRICATION ENGINEERING SPECIFICATIONS G-678262
- VALVE REFERENCE GUIDE (E) E. SPEC. G-678388
- MATERIAL SPEC. PIPE AND FITTINGS (E) E. SPEC. G-568866
- DEFINITION OF SYMBOLS (E) E. SPEC. G-673776
- INSTRUMENTATION AND CONTROL STANDARDS (E) SYMBOLS AND APPLICATIONS FOR INSTRUMENT DIAGRAMS, SECTION 1-1 (E) INSTRUMENT INSTALLATION, SECTION 3-8, ISSUED NOV. 10, 1986
- INSTRUMENT SCHEMATICS, EBASCO DWG. A-198381

CALC. RNP-L/LR-0121  
ATTACHMENT 2  
REV. 0  
PAGE 2 OF 2

INITIAL ISSUE AS REVISION 5.	CAROLINA POWER & LIGHT CO. H.B. ROBINSON PLANT UNIT - NO. 2 HARTSVILLE, SC
TITLE: FLOW DIAGRAM LEGEND	
VENDOR NO. SEE DRAWING NO. E HBR2-7863LR	
SCALE NONE	SHEET 2 OF 2