

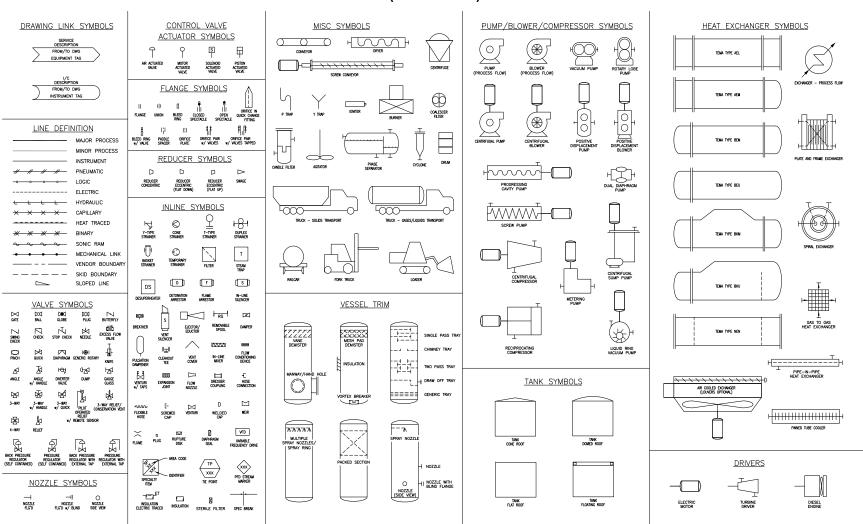
Figure 1.3-4 – SHINE Facility Site Layout

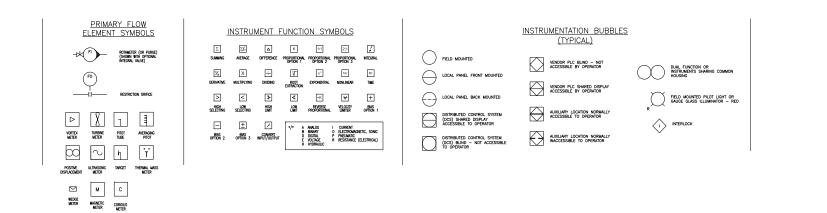
Figure 1.3-5 – RCA Boundaries

Chapter 1 – The Facility

General Description of the Facility

Figure 1.3-6 – Legend for Process Flow Diagrams (Sheet 1 of 2)



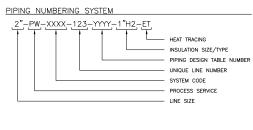


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General Description of the Facility Chapter 1 – The Facility

Figure 1.3-6 – Legend for Process Flow Diagrams (Sheet 2 of 2)



PROCESS SERVICE IDENTIFICATION

ABBREVIATIONS

AG	_	ABOVE GROUND
ATM		ATMOCRHERE
DVD		DVDACC
DIF	_	ATMOSPHERE BYPASS CHEMICAL CLEANOUT
CC	-	CHEMICAL CLEANOUT
		CENTERLINE
		CLEANOUT
		CONNECTION
		DESIGN
		DIFFERENTIAL PRESSURE
ΕĹ	_	ELEVATION
ESD	_	EMERGENCY SHUTDOWN
FOF	_	FACE OF FLANGE
FLG	_	FLANGE
FP	_	FULL PORT
FV	_	FULL VACUUM
GO	_	GEAR OPERATED
CR	_	GRADE
HC	_	HOSE CONNECTION
нн	_	HAND HOLE
		HIGH PRESSURE
		INSTRUMENT AIR SUPPLY
		INSIDE BATTERY LIMITS
IDL		LOW PRESSURE
MOC		MATERIALS OF CONSTRUCTION
MUC	_	MATERIALS OF CONSTRUCTION
ININE	_	NORMALLY NO FLOW OUTSIDE BATTERY LIMITS
OSBL	_	OVERHEAD
R	-	OVERHEAD
	-	RELOCATED
		REQUIRED
SC	-	SAMPLE CONNECTION
		SCHEDULE
		SHUTDOWN
		SPECIFIC GRAVITY
		SET POINT
SS		STAINLESS STEEL
		STANDARD
T/C	_	THERMOCOUPLE
TEMP	_	TEMPERATURE
		TUDEADED

VALVE LIST KEY

1st LETTER	2nd NO	3rd NO	4th NO	5th NO
	TYPE	CLASS	END CONNECTION	MATERIAL
V — VALVE	1 - BALL 2 - CHECK 3 - GATE 4 - GLOBE 5 - BUTTERFLY 6 - PLUG 7 - TRIPLE OFFSET	0 - 125 1 - 150 3 - 300 6 - 600 8 - 800 9 - 900 5 - 1500	1 - SW 2 - SW/BW 3 - BW 4 - BW/FLG 5 - FLG 6 - THREADED 7 - LUGGED 8 - NON-LUGGED 9 - WAFER 0 - SWxFLG	1 - CAST IRON/DUCTILE IRON 2 - LOW CARBON STEEL 3 - STAINLESS 4 - KILLED CARBON STEEL (NACE MR0175 COMPLIANT) 5 - LOW & INTERMEDIATE ALLOY STEEL

ABBREVIATIONS FOR VALVES

FO - FAIL OPEN	FTV - FAIL TO	VENT HPT - HIGH	H POINT LPT -	LOW POINT
FC - FAIL CLOSED	CSO - CAR SEA	L OPEN LO - LOC	CK OPEN NO -	NORMALLY OPEN
FL - FAIL IN LAST P	OSITION CSC — CAR SEA	L CLOSED LC - LOC	CK CLOSED NC -	NORMALLY CLOSED

ABBREVIATIONS FOR HAND SWITCHES

HOA - HAND OFF AUTOMATIC	F/R - FORWARD REVERSE	OCA - OPEN CLOSED	S/S - START/STOP

ABBREVIATIONS FOR EQUIPMENT TAGS

- ABBREVIATIONS FOR EQUIPMENT TAGS

 A = EXCHANGERS, CONDENSERS
 B (LATER)
 C COMMERCASCES, BLOWERS, VACUUM PUMPS, FANS, EXHAUSTERS, REPROCENTION UNITS AND THEIR DRIVES, CEARS, AND FLUID DRIVES
 C COMMERCASCES, BLOWERS, VACUUM PUMPS, FANS, EXHAUSTERS, REPROCENTIONS, DECARBONATORS, AND DECASIFIERS
 C CHARLES ASSORBERS, CHARLESS, AND CHARLESS, AND CHARLESS, TRANSFORMERS, SWITCH BOARDS, ETC.)
 F FILTERS, STRANERS, PURITERS, CENTRIFUCES, AND SILENCERS
 C HANDLING EQUIPMENT, CRANES, HOSTS, AND DEVISES
 H HUMDIFICATION/DEPUMBIFICATION EQUIPMENT
 J INSTRUMENT AND CONTROL BOARDS, PANELS, AND CABINETS
 K DIESEL GENERATORS, DISSEL ENGINES
 M PIPING SPECIALIES (TRAPS, HOSES, EXPANSION JOINTS, RESTRICTION ORIFICES, ETC.)
 F RACKS
 C SPECIAL PACKAGED ITEMS OR SYSTEMS
 T TANKS AND RESERVOIRS
 V VESSELS
 X MISCELLANEOUS AIR HANDLING DEVICES (INCLUDING AIR MIXING BOXES, DUCT SILENCERS, DAMPERS, ETC.)
 T MISCELLANEOUS EQUIPMENT

INSULATION/HEAT TRACING

- AC ACOUSTIC CONTROL INSULATION
 CC COLD SERVICE INSULATION
 CJ CHILLED FLUID JACKETED
 CP CONDENSATION CONTROL
 CT CHILLED FLUID TRACED
 ET ELECTRIC TRACED
 FF FIRE PROTECTION INSULATION
 HC HEAT CONSERVATION INSULATION

INSTRUMENT IDENTIFICATION TABLE

	FIRST LETTER				м	EASUF	RING [DEVICE	S			CON	TROLLI	NG DE	VICES			ALARM	S*		5	SWITCHE	ES*		MISC.
			Е	*	œ	_	Ţ	RT	П	9	22	೨	၁	ે	>	Z	4	٦	т <u>∓</u>	S	s	>	XSL	XSH	
SYMBOL	MEASURED OR INITIAL VARIABLE		PRIMARY ELEMENT	WELL	READOUT (RECORDING)	READOUT (INDICATING)	TRANSMITTER (BLIND)	TRANSMITTER (RECORDING)	TRANSMITTER (INDICATING)	OBSERVATION (LOCAL)	CONTROLLERS (RECORDING)	CONTROLLERS (INDICATING)	CONTROLLERS (BLIND)	S CONTAINED CONTROL VALVE	CONTROL	FINAL CONTROL ELEMENT	BLIND	MOT MOT	нсн нсн	INDICATING	BLIND	RELAY	SHUTDOWN LOW (XSL)	SHUTDOWN HIGH (XSH)	SAFETY DEVICE
Α	ANALYZER		AE	AW	AR	Al	AT	ART	AIT		ARC	AIC	AC		AV		AA	AAL/AALL	AAH/AAHH	AIS	AS	AY	AXSL	AXSH	
В	BURNER, COMBUSTION		BE	BW	BR	BI	BT	BRT	BIT	BG	BRC	BIC	BC			BZ	BA	BAL/BALL	BAH/BAHH	BIS	BS	BY	BXSL	BXSH	
С	CONDUCTIVITY (ELECTRICAL)		CE		CR	CI	CT	CRT	CIT		CRC	CIC	CC			CZ	CA	CAL/CALL	CAH/CAHH	CIS	CS	CY	CXSL	CXSH	
D	DENSITY OR SPEC. GRAV.		DE		DR	DI	DT	DRT	DIT		DRC	DIC	DC				DA	DAL/DALL	DAH/DAHH	DIS	DS	DY	DXSL	DXSH	
Ε	VOLTAGE		EE		ER	EI	ET	ERT	EIT		ERC	EIC	EC			EZ	EA	EAL/EALL	EAH/EAHH	EIS	ES	EY	EXSL	EXSH	
F	FLOW		FE		FR	FI	FT	FRT	FIT	FG	FRC	FIC	FC	FCV	FV		FA	FAL/FALL	FAH/FAHH	FIS	FS	FY	FXSL	FXSH	
G	USER'S CHOICE																								
Н	HAND INITIATED											HIC	HC	HCV	HV						HS	HY			
- 1	CURRENT (ELECTRICAL)		ΙE		IR	- 11	IT	IRT	IIT		IRC	IIC				ΙZ	ΙA	IAL/IALL	IAH/IAHH	IIS	IS	IY	IXSL	IXSH	
J	POWER		JE		JR	JI	JT	JRT	JIT		JRC	JIC				JZ	JA	JAL/JALL	JAH/JAHH	JIS	JS	JY	JXSL	JXSH	
K	TIME OR TIME SCHEDULE		KE		KR	KI	KT	KRT	KIT		KRC	KIC	KC	KCV		KZ	KA	KAL/KALL	KAH/KAHH	KIS	KS	KY	KXSL	KXSH	
L	LEVEL		LE	LW	LR	LI	LT	LRT	LIT	LG	LRC	LIC	LC	LCV	LV		LA	LAL/LALL	LAH/LAHH	LIS	LS	LY	LXSL	LXSH	
M	MOISTURE OR HUMIDITY		ME		MR	MI	MT	MRT	MIT		MRC	MIC	MC		MV		MA	MAL/MALL	MAH/MAHH	MIS	MS	MY	MXSL	MXSH	
N	N USER'S CHOICE																								
0	USER'S CHOICE																								
P	PRESSURE OR VACUUM		PE		PR	PI	PT	PRT	PIT		PRC	PIC	PC	PCV	PV		PA	PAL/PALL	PAH/PAHH	PIS	PS	PY	PXSL	PXSH	PSV PSE
Q	QUANTITY OR EVENT		QE		QR	QI	QT	QRT	QIT		QRC	QIC				QZ	QA	QAL/QALL	QAH/QAHH	QIS	QS	QY	QXSL	QXSH	
R	RADIOACTIVITY		RE	RW	RR	RI	RT	RRT	RIT		RRC	RIC	RC			RZ	RA	RAL/RALL	RAH/RAHH	RIS	RS	RY	RXSL	RXSH	
S	SPEED OR FREQUENCY		SE		SR	SI	ST	SRT	SIT		SRC	SIC	SC	SCV	SV	SZ	SA	SAL/SALL	SAH/SAHH	SIS	SS	SY	SXSL	SXSH	
T	TEMPERATURE		TE	TW	TR	TI	TT	TRT	TIT		TRC	TIC	TC	TCV	TV		TA	TAL/TALL	TAH/TAHH	TIS	TS	TY	TXSL	TXSH	TSE
U	MULTI-VARIABLE														UV		UA					UY		UU	
V	VIBRATION		VE		VR	VI	VT	VRT	VIT								VA		VAH/VAHH	VIS	VS	W		VXSH	
W	WEIGHT OR FORCE		WE		WR	WI	WT	WRT	WIT		WRC	WIC	WC	WCV		WZ	WA	WAL/WALL	WAH/WAHH	WIS	WS	WY	WXSL	WXSH	
X	SHUTDOWN														XV		XA	XAL/XALL	XAH/XAHH		XS	XY			
Y	EVENT, STATE OR PRESENCE																								
Z	POSITION		ZE		ZR	ZI	ZT	ZRT	ZIT		ZRC	ZIC	ZC	ZCV	ZV		ZA	ZAL/CLOSE	ZAH/OPEN	ZIS	ZS	ZY			
*S,	SWITCH, THE ACTUATING DEVIC THE SAME FASHION AS A, ALAF	CE MAY BE I RM, THE ANI	USED NUNC	IATING	DEV	ICE.							THE F	OLLOW					ABBREVIATION ABBREVIATION				FERRED L	JSAGE)	
\vdash	FIRST POSITION	SECOND	POSI	TION		THIE	SD BC	MOITIZE		FOI	IRTH P	OSITION				POSITI					THIRD POSITION				RTH POSITION
h .		ALARM	. 03		-			SILIOI	-	- 100	Same F	5511101	_			اارون	ORIFICE (RESTRICTION)				+		Johnson	1.00	1 0311018
B BURNER C CONDUCTIVITY (ELECTRICAL) D DENSITY OR SPECIFIC GRAVITY F FOLOW F FLOW HAND INITIATED CURRENT (ELECTRICAL) INDICATOR, INDICATION		0)	R CD	DEVICE ELEMENT				HIGH	CATOR	₹	OP QRSTUV*	Q QUANTITY OR EVEN R RADIOACTIVITY S SPEED OR FREQUE T TEMPERATURE U MULTIVARIABLE				ACUUM POINT (TÈXT CON ENT INTEGRATE (TOTA RECORDER SWITCH, SAFETY TRANSMITTER MULTIFUNCTION I. ANALYSIS VALVE. DAMPER.			NN.) RECORDER SAFETY, SWITCH TRANSMITTER MULTIFUNCTION VALVE, DAMPER,			MUL	ORDER TIFUNCTION /E, DAMPER,		
KI	YOMER TIME EVEL MOISTURE OR HUMIDITY	TIME RATE	SCAN IME RATE OF CHANGE JIGHT (PILOT) JOMENTARY			OT) LOW			CONTROL STATION LOW			X SHUTDOWN Y EVENT, STATE OR			X SHUTDOWN, X AXIS			LOUVER RELAY DRIVE, FINAL CONTROL ELEMENT				OVER			

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