30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39

VALVE SYMBOLS

PGE & COMMON (NOTE 7) TITLE WESTINGHOUSE

10
6"
0-0627-D

NON-CONTROLLED (MANUAL)
SEE VALVE SPEC. - DWG..049020
ADDITIONAL VALVE DESCRIPTION
SERIES NO.
PRESSURE RATING
TYPE
SIZE (SHOWN ONLY IF DIFF. FROM LINE SIZE)
FOR TUBING VALVE IDENTIFICATION SEE DWG 053479

VALVE TYPE
VALVE SIZE
(SPECIFIED ON VALVE REFERENCE GUIDE) DC-663219-30
3/4-T58
ITEM NO. SEE DWG. 102039 (ALTERNATE SPEC)

MODULATING VALVE
NORMALLY CLOSED VALVE (ON-OFF)
NORMALLY OPEN VALVE (ON-OFF)
THROTTLED VALVE (MANUAL)

(W) USES THE VALVE TYPE DESIGNATION SHOWN BELOW

EXCESS FLOW CHECK VALVE

PG&E USES THE FUNCTIONAL DESIGNATION SHOWN ABOVE

GATE VALVE
GATE VALVE (DOUBLE DISC)
NEEDLE VALVE
GLOBE VALVE
BALL VALVE
DIAPHRAGM VALVE
BUTTERFLY VALVE

NORMALLY CLOSED PORT
NORMALLY OPEN PORT
THREEWAY VALVE
ALWAYS OPEN (COMMON) PORT

CHECK VALVE
CHECK VALVE WITH OPERATOR
DAMPER

SEE ABBREVIATION
AIR OPERATOR
AIR OPERATOR (WITH POSITIONER)
INSTRUMENT ACTUATED OPERATOR WITH VALVE POSITIONER
PROCESS ACTUATED OPERATOR VALVE WITH VALVE POSITIONER
PROCESS ACTUATED VALVE OPERATOR WITH PILOT (DOWNSTREAM BLEED)
DOUBLE DISC GATE VALVE WITH THERMAL RELIEF CONNECTION
ELECTRIC SOLENOID OPERATOR
ELECTRIC MOTOR OPERATOR
MANUAL REGULATOR OR SELF CONTAINED REGULATOR
PRESSURE REDUCING REGULATOR WITH EXTERNAL PRESSURE TAP
RUPTURE DISC.
2X3
RELIEF VALVE
VACUUM BREAKER
STEM LEAKOFF
ANGLE VALVE
OR
EXTENSION STEM OPERATOR THRU WALL PENETRATION

EQUIPMENT SYMBOLS

PGE & COMMON (NOTE 7) TITLE WESTINGHOUSE

HEAT EXCHANGER (ANY TYPE)
HEAT EXCHANGER (ALTERNATE)
FLOW STRAIGHTENING VANE
PULSATION DAMPENER
POSITIVE DISPLACEMENT PUMP
BLENDER
CENTRIFUGAL PUMP
SMALL CANNED MOTOR PUMP
FAN, BLOWER OR COMPRESSOR
JOHNSON SCREEN
MIXER
EJECTOR, EDUCTOR
RESTRICTING ORIFICE
FLOW PRIMARY ELEMENT
STEAM TRAP (SEE DWG. 049063 FOR DETAILS)
FILTER
STRAINER (NUMBER IS NOT NEEDED FOR START-UP STRAINER)
CONICAL STRAINER (FOR START-UP ONLY)
EXPANSION JOINT
FLEXIBLE CONNECTION
FLEXIBLE HOSE
DISCONNECT COUPLING
OR
BLIND PIPE END (PLUG OR CAP)
BLIND FLANGE
FIRE HOSE CONNECTION
8"
NOZZLE TERMINAL (SIZE SHOWN ONLY IF DIFF. FROM PIPE)
MFR. NOZZLE IDENTIFICATION (IF AVAILABLE)
REDUCER
FLANGE CONNECTION (PIPING OR EQUIPMENT)
HEATER (STEAM OR ELECTRICAL)
OR
LOOP SEAL (TRAP)
SPRAY NOZZLES
SPARGER (INSIDE VESSEL)
SPECTACLE FLANGE
THERMAL SLEEVE

INSTRUMENT SYMBOLS

COMMON (NOTE 7) TITLE

PI 16 22-A34
INSTRUMENT NO IDENTIFICATION BALLOON (SEE TABLE BELOW)
INSTRUMENT SCHEMATIC REFERENCE - USED FOR ALL MULTIPLE DEVICE INSTRUMENT LOOPS

TI 781 / T2410A
INSTRUMENT NO.
(W) COMPUTER INPUT NO

PI 6 14 MECHANICAL PANEL NO. (SEE DWG. 101904)

PS 6 HIA INST. FUNCTION - SEE LISTING BELOW (USED FOR SINGLE DEVICE INSTRUMENT ONLY)

DEVELOPMENT OF TAG NO. DESIGNATION (SEE ALSO SPECIAL TAGS)

INSTRUMENT FUNCTION (ATTACHED TO PIPE ONLY)

PROCESS VARIABLE (△16, 1)	THERMOWELL FOR THE SENSOR	ABBREVIATION	CONTROL VALVE	INDICATOR	SENSOR OR ELEMENT	SWITCH: BLIND	SWITCH: W/INDICATOR	TEST	TRANSMITTER	CONTROL: BLIND	CONTROL: W/INDICATOR
ANALYSIS	—	AN	—	ANI	CEL	ANS	—	ANX	ANT	—	—
FLOW	—	F	FCV	FI	FE	FS	FIS	FX	FT	FC	FIC
LEVEL	—	L	LCV	LI	—	LS	LIS	LX	LT	LC	LIC
NUCLEAR	—	N	—	NI	NE	—	—	—	—	NC	NIC
PRESSURE	—	P	PCV	PI	—	PS	PIS	PX	PT	PC	PIC
RADIATION	—	R	RCV	RI	RE	RS	RIS	RX	RT	RC	RIC
TEMPERATURE	TW	T	TCV	TI●	TE○	TS	TIS	TX	TT	TC	TIC
POSITION	—	PO	PO▲	POI	—	POS	—	—	POT	—	—
MISC. (VIBRATION SW. SPEED CONTROL, ETC.)	—	Y	YCV	YI	YE	YS	YIS	YX	YT	YC	YIC

▲ POSITIONER
● TI-USED FOR THERMOCOUPLE ELEMENT ALSO
○ TE-USED FOR RTD ELEMENT ONLY

INST. FUNCTION LEGEND

APS-AUTOMATIC PUMP START/STOP
HIA-HIGH ALARM
LOA-LOW ALARM
INT-INTERLOCK
TST-TEST
HLA-HIGH/LOW ALARM

SPECIAL TAG:

RV-RELIEF VALVE
SC-SAMPLE COOLER
SV-SOLENOID VALVE
STR-STRAINER
TRP-TRAP
HCV-HAND CONTROL VALVE
RTD-RESISTANCE TEMPERATURE DETECTOR
△10 FY-SAMPLE PUMP

GENERAL NOTES:

1. FOR UNIT LINE NO. SEE LINE DESIGNATION (102040)
2. SEE INDIVIDUAL SCHEMATIC FOR SPECIAL SYMBOLS NOT SHOWN ON THIS LEGEND.
3. ON VENTS AND DRAINS WHERE A DOUBLE BARRIER IS REQUIRED REFER TO DWG. 049066 NOTE 4.
4. DC-663211-16
   - SHEET NUMBER
   - RECORD NUMBER
5. ALL VALVES SHOWN TO HAVE LEAKOFF CONNECTIONS SHALL BE PERMANENTLY PIPED TO THE APPROPRIATE DRAIN POINT. ALL OTHER VALVES WITH LEAKOFF WILL HAVE LEAKOFF CONNECTIONS CAPPED.
6. (*--) SUPPLIED WITH ASSOCIATED EQUIPMENT. (SEE PIPING SCHEMATIC FOR SPECIFIC INFO.)
   (**--) INDICATES PIPE NOT SUPPLIED BY KELLOGG (8711) OR SCOTT (8831) (SEE PIPING SCHEMATIC FOR SPECIFIC INFORMATION)
7. COMMON-INDICATES THAT SAME SYMBOL IS USED FOR (W) OR PG&E. (30-E)
8. (W) SYMBOLS USED ON THIS SHEET EXTRACTED FROM DC-663200-10.
9. EQUIPMENT NUMBERING:
   0-1 - FOR UNITS 1 & 2 (COMMON)
   1-1 - FOR UNIT 1 ONLY
   2-1 - FOR UNIT 2 ONLY
   - EQUIPMENT NUMBER
   - UNIT NUMBER

△11 3

LINE CODING

COMMON (NOTE 7) TITLE

S2 36 4111
INSULATION SPECIFICATION (101905)
LINE SIZE (INCHES)
LINE NO. (OMITTED FOR <2-1/2" SHORT RUN)
PIPING SPECIFICATION (049021)

S2-36-4111 ALTERNATE △12 1

INSULATING FLANGE (SEE DWG. 065645)
MAIN FLOW LINES
SECONDARY FLOW LINES
INSTRUMENT LINES (PROCESS)
MAIN HEADER (AIR)
BELLOWS SENSOR FILLED SEALED SYSTEM (CAPILLARY)
INDICATES CHANGE OF LINE SPEC. SIZE OR NO. AND EQUIP. BOUNDARY
PIPE PENETRATION NO.
INSIDE CONTAINMENT | OUTSIDE CONTAINMENT
CHANGE OF PIPING SPEC.
INSIDE OUTSIDE
SHIELD WALL PENETRATION
CHANGE OF PG&E CLASS
HEAT TRACING AND BOUNDARY

△11 3 △11 2 △11 1

PG & E CODE CLASS	APPLICABLE CODES **	DESIGN CLASS	SEISMIC CLASSIFICATION
A	DESIGN - B31.1, FABRICATION, ERECT., NDE - B31.7 CLASS I	I	I
B	DESIGN, FABRICATION, ERECTION, NDE - B31.7 CLASS II	I	I
C	DESIGN, FABRICATION, ERECTION, NDE - B31.7 CLASS III	I	I
△7 1 D △8 1	DESIGN, FABRICATION, ERECTION NDE-B31.7 CLASS III FOR NEW WORK DESIGN, FABRICATION, ERECTION NDE, B31.1 FOR WORK PERFORMED PRIOR TO UPGRADE	I	I
△7 4 E	DESIGN, FABRICATION, ERECTION NDE-B31.1	II	NON I
△7 2 F	PIPING DESIGN, NDE; FABRICATION & ERECTION, ANSI 31.1 - 1967 WITH ADDENDA & SHALL BE SEISMICALLY QUALIFIED FOR DESIGN EARTHQUAKE (DE) CONDITION △11 3	II △11 2	△11 4 NON I (DE)
G	NFPA AND ALSO COMPLIES WITH B31.1 *	II	I
G1	NFPA STANDARDS *	II	NON I
△7 2 H	PIPING DESIGN, NDE: FABRICATION AND ERECTION, ANSI B31.1-1967 WITH ADDENDA	II	NON I
△7 3 J △9 1	ORIGINAL INSTALLATION-PGE CODE CLASS E, DESIGN CLASS I (ANSI B31.7 CLASS III, 1969 EDITION PLUS 1970 ADDENDA) FOR REPAIR, REPLACEMENT OR NEW CONSTRUCTION	I	△11 4 I

* 10CFR50 APPENDIX B OR ALTERNATE QUALITY ASSURANCE PROGRAM APPLICABLE TO THESE CODE CLASSES.
** REFER TO PG&E SPECIFICATION 8707 AND 8711 TO DETERMINE THE PIPING CODES AND STANDARDS APPLICABLE TO A PARTICULAR PG&E CODE CLASS, NOT LISTED ABOVE.

VENT, DRAIN, TELL TALE SYSTEM IDENTIFICATION

TEST VENT
VENT
VENT (EQUIPMENT)
TV V V
SEE DWG. 049066 FOR V, D&TT VALVE DETAILS. ALL OTHER VALVES TO BE IDENTIFIED
TT TC D D
DRAIN FUNNEL
DRAIN
TEST CONN.
TELL TALE

REFERENCE BLOCK COMMON (NOTE 7)

42-D | 02
PIPING OR INSTR. SCHEM. "FLAG"
DWG. NO. (LAST TWO DIGITS) NO. OMITTED FOR THE SAME DWG
DWG. COORDINATE (SIDE)
DWG. COORDINATE (TOP)
42-D-02 ALTERNATE

ABBREVIATION & DESCRIPTION

NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
RWST	REFUELING WATER STORAGE TANK
SRST	SPENT RESIN STORAGE TANK
PRT	PRESSURIZER RELIEF TANK
PRL	PRESSURE RELIEF LINE
ATM	ATMOSPHERE
PW	PRIMARY WATER
FAI	FAIL AS IS
FC	FAIL CLOSED
FO	FAIL OPEN
SC	SEALED CLOSED
SO	SEALED OPEN
DH	DRAIN HEADER △12 2
GA	GAS ANALYZER
HT	HOLD-UP TANK (LIQUID)
NO	NORMALLY OPEN
NC	NORMALLY CLOSED
ECC	EMERGENCY COOLING CONNECTION
PP	PUMP
VH	VENT HEADER
DW	DEMINERALIZED WATER
D	LOCAL DRAIN
V	VENT TO ATMOSPHERE
N_2	NITROGEN
H_2	HYDROGEN
T	CONTAINMENT ISOLATION SIGNAL (PHASE A)
S	SAFETY INJECTION SIGNAL
P	CONTAINMENT SPRAY SIGNAL & CONTAINMENT ISOLATION SIGNAL (PHASE B)
RCDT	REACTOR COOLANT DRAIN TANK
IMB	INSIDE MISSILE BARRIER
OMB	OUTSIDE MISSILE BARRIER
RR	REACH ROD
PG	INDICATE PG&E SCOPE WITH A (W) SYSTEM
WM	WALL MOUNTED
(W)	WESTINGHOUSE ELECTRIC CO.
*	SUPPLIED WITH ASSOCIATED EQUIPMENT.
M	MAIN STEAM ISOLATION SIGNAL △13 1
DR	DESIGN REQUIREMENT. SEE SYSTEM DCM (DESIGN CRITERIA MEMORANDUM) FOR DESIGN REQUIREMENTS/LIMITATIONS. △15 1

ATIC

△18 1
UNIT 1

P G & E CO. SHEET 3 PAGE 0 | 102001 | REV. 18

9/8/00	BLFI	RHSI	-	KERSI J. DALAL	MECHANICAL	M 16690	3/31/2004	Revised per FCT 025114
DATE	DWN	RE	IV	PROFESSIONAL ENGINEER	PE DISC.	PE#	PE EXP.	

CAD User:BLFI Date: 9-08-2000
DGN=2001S3.DGN
RASTER=2001S3.TIF
3NPGIC