

SKID LIMITS (Q-110)

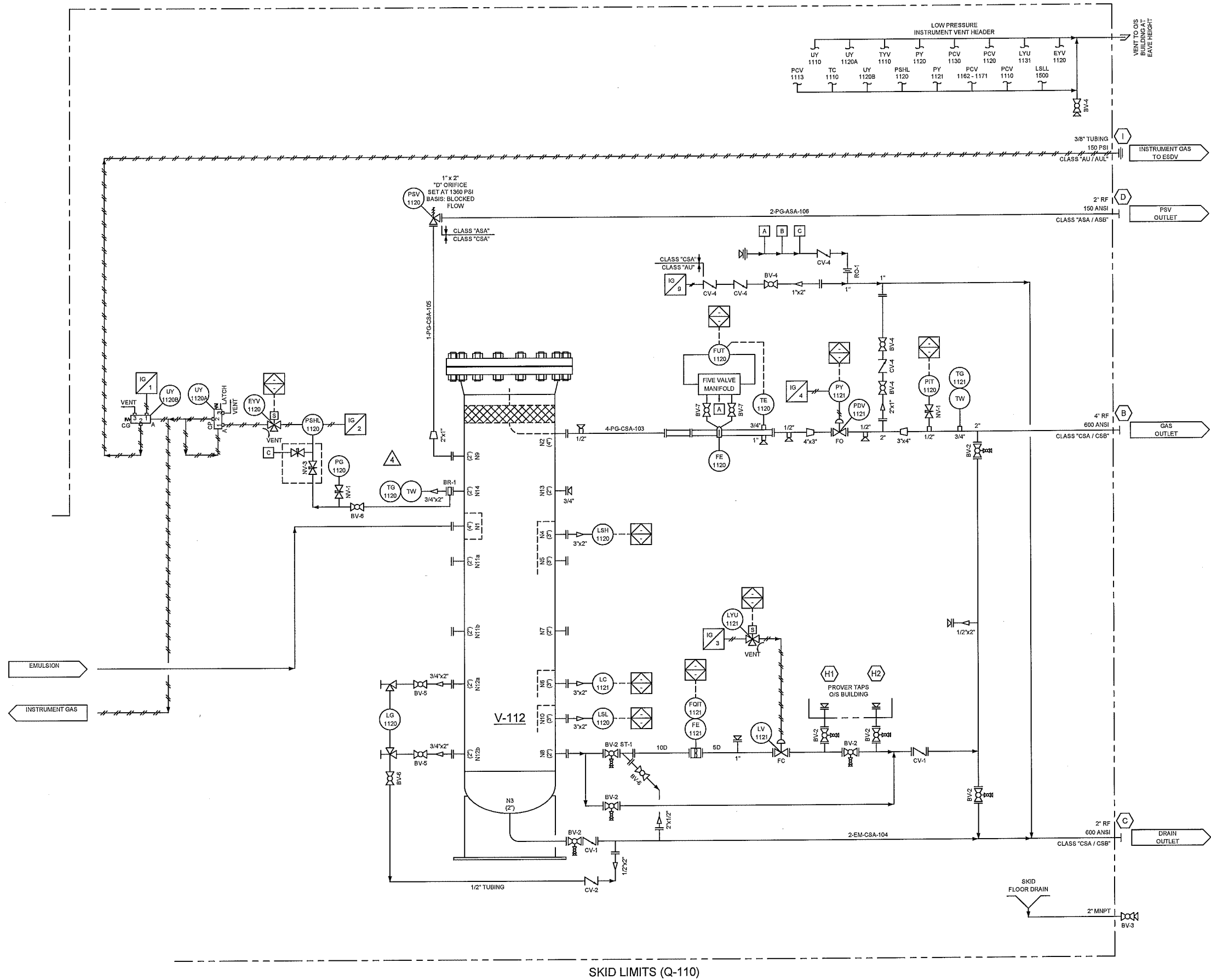
REV.	DATE	DESCRIPTION	BY	CHK'D	APP'D
4	12/11/14	AS BUILT	DB	LW	MC
3	09/15/14	CHANGED LG 1110 SPECS.	DB	LW	MC
2	09/15/14	REVISED AS PER INTERNAL PROJECT REVIEW	DB	LW	MC
1	09/08/14	CHANGED INSTRUMENTS TO 24VDC	DB	LW	MC
0	08/19/14	ISSUED FOR CONSTRUCTION	DB	LW	MC

GlobalFlow

CUSTOMER: **Encana Corporation
c/o Solaris MCI**

TITLE / PROJECT: **24"OD X 120" S/S X 1360 PSI
SOUR VERTICAL SEP. PKG. C/W
1.5M BTU/HR LINE HEATER**

DRAWING NAME: P&ID	QUANTITY: 1	PACKAGE SERIAL NO. (S): 14-086
JOB NO. (S): 14-086	DRAWN BY: D. BRYAN	DATE: 06/20/2014
REV. NO.: 4	PAGE NO.: 1 OF 3	SCALE: N.T.S.
DRAWING NO.: 14-086-P&ID		



GlobalFlow

CUSTOMER:		TITLE / PROJECT:	
Encana Corporation c/o Solaris MCI		24"OD X 120" S/S X 1360 PSI SOUR VERTICAL SEP. PKG. C/W 1.5M BTU/HR LINE HEATER	
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JOB NO. (S):	14-086	PACKAGE SERIAL NO. (S):	14-086
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VALVES & SPECIAL ITEMS		
TAG	QTY.	DESCRIPTION
BV-1	3	WKM BALL VALVE, 1/2" NPT 3M RP, SPRING LOADED
BV-2	8	GVS DOUBLE ISOLATION & BLEED BV, 2" 600 ANSI RF FP, NACE
BV-3	2	WKM BALL VALVE, 2" NPT 3M RP
BV-4	8	WKM BALL VALVE, 1" NPT 3M RP, NACE
BV-5	4	WKM BALL VALVE, 3/4" NPT 3M RP, NACE
BV-6	8	WKM BALL VALVE, 1/2" NPT 3M RP, NACE
BV-7	2	WKM BALL VALVE, 1/2" NPT 3M RP, NACE
BV-8	2	WKM BALL VALVE, 1/4" NPT 3M FP, NACE
BV-9	2	NEO BALL VALVE, 1" NPT, 600 PSI FP, 316SS, CSA 3.16
BV-10	2	NEO BALL VALVE, 1/4" NPT, 600 PSI FP, 316SS, CSA 3.16
CV-1	2	WHEATLEY WAFER CHECK VALVE, 2" 600 ANSI, NACE
CV-2	3	WHEATLEY 820 SWING CHECK VALVE, 1/2" NPT, 2160 PSI, NACE
CV-3	3	1/4" FNPT BRASS LINE CHECK, 3M (SUPPLIED WITH PUMP)
CV-4	4	WHEATLEY 820 SWING CHECK VALVE, 1" NPT, 2160 PSI, NACE
NV-1	3	CENTURY NEEDLE VALVE, 1/2" NPT MXF 6M, SS
NV-2	15	CENTURY NEEDLE VALVE, 1/4" NPT MXF 6M, SS
NV-3	1	CENTURY BLOCK AND BLEED NEEDLE VALVE, 1/2" MXF, 10M, SS
RO-1	1	ORIFICE PLATE, 1" 600 ANSI, 1/8" THK, 0.375" BORE, 316SS
SCV-1	1	SMC MODEL NAS2000-N02 FLOW CONTROL VALVE, 1/4" NPT, ALUM.
ST-1	1	ALTA Y-STRAINER, 2" 600 ANSI RF, 316 BASKET, 1/8" PERFORATIONS, NACE
ST-2	1	VALVE-TEK Y-STRAINER, 1" FNPT, 600 PSI, 316SS
BR-1	1	BLEED RING, 2" 600 ANSI, TAPPED (1) 1/2" NPT, SA105N

BILL OF MATERIALS	
TAG NO.	DESCRIPTION
PG 1113	ELITE PI, 2-1/2" FACE, 15 PSI, DUAL SCALE, SS/BRASS, 1/4" BTM, LF
PG 1120	PI, 4" FACE, 1500 PSI, DUAL SCALE, SS/SS, 1/2" BTM, LF, NACE
PG 1130	PI, 2-1/2" FACE, 160 PSI, DUAL SCALE, SS/BRASS, 1/4" BTM, LF
PG 1170 / 1171	PI, 2-1/2" FACE, 60 PSI, DUAL SCALE, SS/BRASS, 1/4" CBM, LF
PIT 1120	ROSEMOUNT 2051T PRESSURE TRANSMITTER, 2051TG4A2B21AK6Q15M5, 0-4000 PSI, 4-20mA, 316SS, 1/2" FNPT, CSA, XP, LCD DISPLAY
PSHH 1112	CCS 6900GZE12 PRESSURE SWITCH, 3-20 PSI R, 1-18 PSI F, SPDT, SS, 1/2" FNPT, SET AT 11 PSI RISING
PSHL 1120	FISHER 4660 HI-LO PRESSURE PILOT, 0-1500 PSI, 316SST BOURDON TUBE
PSLL 1111	CCS 6900GZE12 PRESSURE SWITCH, 3-20 PSI R, 1-18 PSI F, SPDT, SS, 1/2" FNPT, SET AT 4 PSI FALLING
PSV 1120	FARRIS 26DA13-120/00, 1" 600 ANSI X 2" 150 ANSI, NACE, SET AT 1360 PSI
PSV 1130	TAYLOR 8200, 1" MNPT X 1-1/2" FNPT, "F" ORIFICE, SET AT 150 PSI
PSV 1140 / 1150	NUPRO SS-4R3A5-EP, 1/4" MXF, SET AT 4206 PSI
PSV 1160	NUPRO SS-4R3A5-EP, 1/4" MXF, SET AT 870 PSI
PV / PY 1121	MASTERFLO P2E CHOKE VALVE, 4" 2500 ANSI RTJ INLET, 4" 600 ANSI RF OUTLET, NACE, +250°/-50°F, TUNGSTEN CARBIDE ENHANCED FLOW TRIM, VITON SEALS, SS WETTED INTERNALS, PSL 1 CERTIFICATION C/W FISHER 667 ACTUATOR, SIZE 70, FC & FISHER DVC6200 FIELDVUE POSITIONER, 4-20mA, 0-33 PSI, CSA EXPLOSION PROOF
PVRV 1114	WENCO 8" THIEF HATCH C/W BUNA-N GASKET AND HARDWARE, SET AT 8oz PRESSURE, 0.4oz VACUUM
TC / TW 1110	KIMRAY TEMPERATURE CONTROLLER, HT12, 750F, 2.50 PSI/F, 1/2" MNPT C/W THERMOWELL, 3/4" X 1/2" X 12", 316SS
TG / TW 1111	TI, 3" FACE X 6" STEM, -40F/300FC, DUAL SCALE, 1/2" CBM, NACE C/W THERMOWELL, 3/4" X 1/2" X 6" X 0.260" STEM, 316SS
TG / TW 1120	TI, 3" FACE X 6" STEM, -40F/160F, DUAL SCALE, 1/2" CBM, SWIVEL HEAD, NACE C/W THERMOWELL, 3/4" X 1/2" X 6" X 0.260" STEM, 316SS
TG / TW 1121	TI, 3" FACE X 2-1/2" STEM, -40F/160F, DUAL SCALE, 1/2" CBM, NACE C/W THERMOWELL, 3/4" X 1/2" X 2-1/2" X 0.260" STEM, 316SS
TSHH / TW 1111	CCS 6900TE16 TEMPERATURE SWITCH, 185-315F R, 165-308F F, SPDT, SS, 1/2" MNPT C/W THERMOWELL, 3/4" X 1/2" X 7-1/2" X 0.385" STEM, 316SS
TV 1110	MARSH/BELLOFRAM CONTROL VALVE, P119, 1" FNPT, FC, 150 PSI
TYV 1110	PETER PAUL EL6320022SCCP 24 3-WAY SOLENOID VALVE, SS, 24VDC, 1/8" FNPT, 1/32" ORIFICE, 120 PSI MAX.
UY 1120A / 1110	AMOT 4057 CP 3-WAY VALVE, MANUAL LATCH/PRESSURE, SPRING RETURN
UY 1120B	AMOT 4057 CG 3-WAY VALVE, PRESSURE OPERATED, SPRING RETURN
XV 1111 / 1112	PETER PAUL GAS SHUTOFF VALVE, E82828023DCCP-S 24, 120 PSI, 316SS 1" FNPT, 1" ORIFICE, 24VDC, CSA 6.5 C/I
XV 1113	PETER PAUL GAS SHUTOFF VALVE, E222019YCCP 24, 120 PSI, 316SS 1/4" FNPT, 5/32" ORIFICE, 24VDC, CSA 6.5 C/I

TAG NO.	DESCRIPTION
BH-119A / 119B	CCI THERMAL MKII 24" X 24" NAT. GAS 12V, 20,000 BTU/HR HEATER, 24" X 24" GRILL, 24" VENT HOOD, FISHER 912 REG., MAXI APPL. REG., TEMP. CONTROLLER, SAFETY SHUT-OFF VALVE, 30' BATTERY LEADS
BMS-111	ACL-5500 SERIES COMBUSTION SAFETY CONTROLLER 12-24VDC, CSA-C22.2 No. 199-M89
C-111	COIL ASSEMBLY, PRE-HEAT - 6 PASS, 4503 PSI @ +200/-20°F RE-HEAT - 6 PASS, 1360 PSI @ +200/-20°F
H-111	54"OD X 240" S/S LINE HEATER C/W 14"OD FIRE-TUBE & STACK
P-114 / 115	BRUIN BR5113LP-2511 CHEM. PUMP, 3/8" PLUNGER, BUNA HARD PACKING, FLUOROSILICONE SEALS, MICRO SWITCH, 6000 PSI MAX. C/W DRIP TRAY
P-116	WILLIAMS CP250V225-CR-TC CHEMICAL PUMP, 1/4" CERAMIC PLUNGER, TEFLON COMPOSITE SEALS, 7,200 PSI MAX. @ 100 PSI AIR/GAS SUPPLY
TK-111	24"OD X 96" S/S HORIZONTAL EXPANSION TANK
V-112	24"OD X 120" S/S X 1360 PSI @ +200°/-20°F SOUR VERTICAL SEPARATOR
V-113	FUEL GAS SCRUBBER, 8" X 36" OAL X 285 PSI @ +650°/-20°F, SWEET ZIRCO FAH 24-14A FLAME ARRESTED BURNER, 1.50M BTU/HR, C/W 24" ALUMINUM FLAME ARRESTOR TO FIT A 14" FIRE-TUBE, ACL M150 MIXER, B15016 BARREL & ON15014 NOZZLE, ACL-M-50 PILOT ASSEMBLY C/W ACL PILOT NOZZLE
BE 1110	ASCO EF8320G200 3-WAY SOLENOID VALVE, UNIVERSAL, SS, 24VDC, 1/4" FNPT, 3/32" ORIFICE, 60 PSI MAX.
EYV 1120	CANALTA DUAL CHAMBER RUN, 4" 600 ANSI, NACE, FOE, SCH. 80, AGA-2000, FLANGED FLOW CONDITIONER, 91" OAL, (1) 1" & (1) 3/4" TOLS
FE 1120	NUFLO TURBINE FLOW METER, 2" EZ-IN X 1/2" C/W HARDWARE KIT, 2" 600 ANSI, NACE, MAGNETIC PICKUP (3/8"-3/4"), MCIII TOTALIZER, 4-20 mA
FE / FQIT 1121	ROMET RM40 PD METER, 1-1/2" MNPT, 40 m3/hr READOUT @ 0 PSI, PULSE L&G 48" TANK GAUGE, SG48BC
FG 1140 - 1160	MUIS 74612343A GLASS TUBE ROTAMETER, 1/2" FNPT, 316SS
FG 1170 / 1171	SCADA PACK 4102, 30-1500 PSI STATIC, 10-840" WC, -40-1200°F C/W 5 VALVE SS MANIFOLD, MOUNTING BRACKET, 3-WIRE PLATINUM 100-OHM RTD SENSOR, SS AND TOW, 3/4" X 1/2" X 2-1/2" X 0.260", 316SS
FUT / TE 1120	SCADA PACK 4203, 30-1500 PSI STATIC, 10-840" WC, -40-1200°F MOUNTING BRACKET, 3-WIRE PLATINUM 100-OHM RTD SENSOR, SS & TOW, 3/4" X 1/2" X 1-3/8" X 0.260", 316SS
FUT / TE 1131	L&G FUEL GAS SHUTOFF, FGSO 2A-11F
HLS 1130	NORRISEAL 1001A L ELECTRIC, SPDT, DA, PVC DISPLACER, NACE
LC 1121	PENBERTHY 2TL8 LEVEL GAUGE, 690 PSI C/W 330 GAUGE COCKS
LG 1120	PENBERTHY 1RM9 LEVEL GAUGE, 2025 PSI C/W 330 GAUGE COCKS, NACE
LSH 1120	KIMRAY CEC2, 2" NPT, 316SS BODY, 316SS FLOAT, M/O, SPDT, NACE
LSL 1120	KIMRAY CEC2, 2" NPT, 316SS BODY, 316SS FLOAT, M/O, SPDT, NACE
LSLL 1110	MURPHY LS200NDVO, 2" NPT, CS BODY, 304SS FLOAT C/W KIMRAY EXTERNAL FLOAT CHAMBER, 5523
LV 1121	FISHER D4, 2" 600 ANSI RF, 1/2" TRIM, FC, NACE
LYU 1121	ASCO EF8320G200 3-WAY SOLENOID VALVE, UNIVERSAL, SS, 24VDC, 1/4" FNPT, 3/32" ORIFICE, 60 PSI MAX.
PCV 1110	BELGAS R627, 1" NPT STEEL BODY, 1/2" ORIFICE, 5-20 PSI RANGE
PCV 1113	MARSH/BELLOFRAM 50 REGULATOR, 1/4" FNPT, 0-35 PSI RANGE
PCV 1130	FISHER 627, 1" NPT STEEL BODY, 1/8" ALUMINUM ORIFICE, NYLON DISK, 70-150 PSI RANGE, 2000 PSI MAX. INLET
PCV 1162 / 1169	FISHER 67CFR, 1/4", 0-125 PSI, TAPPED BONNET
PCV 1163 - 68 / 1170 - 71 / 1120	FISHER 67CFR, 1/4", 0-35 PSI, TAPPED BONNET
PDV / PY 1120	FISHER ET-BODY, 3" 600 ANSI RF, 657 ACTUATOR, SIZE 45, FO C/W FISHER I2P-100 TRANSDUCER, 4-20 mA INPUT, 2-33 PSI OUTPUT, CSA, XP
PG 1111 / 1112	ELITE PI, 2-1/2" FACE, 30 PSI, DUAL SCALE, SS/BRASS, 1/4" BTM, LF

PACKAGE CONNECTION SCHEDULE	
A	4" RTJ, 2500 ANSI, EMULSION INLET
B	4" RF, 600 ANSI, V-112 GAS OUTLET
C	2" RF, 600 ANSI, V-112 DRAIN OUTLET
D	2" RF, 150 ANSI, V-112 PSV OUTLET
E	1-1/2" FNPT, 150 PSI, V-113 PSV OUTLET
F	1/2" TUBING, 150 PSI, V-113 DRAIN OUTLET
G	1" FNPT, 600 ANSI, FUEL GAS INLET
H1 / H2	2" RF, 600 ANSI C/W 2" FNPT (PLUGGED), V-112 PROVER OUTLET / INLET
I	3/8" TUBING, 150 PSI, INSTRUMENT GAS TO ESDV
J1 / J2	1/2" TUBING, 150 PSI, P-114 / P-115 METHANOL/CHEMICAL INLET
J3	1/2" TUBING, 150 PSI, P-116 CORROSION INHIBITOR INLET
K1 / K2	3/8" TUBING, 2500 ANSI, P-114 / P-115 METHANOL/CHEMICAL INLET
K3	1/2" TUBING, 600 ANSI, P-116 CORROSION INHIBITOR OUTLET
L	1/2" TUBING, 150 ANSI TUBING, FLARE GAS TO PILOT

- ### GENERAL NOTES
1. QUALITY CONTROL PROGRAM NUMBER IS AQP-1464
 2. THREADED PIPING PROGRAM IS GF-1 REV. 1
 3. PROCESS/SENSING TUBING (GAS) TO BE 1/2" X 0.049" W.T. 316SS
 4. PROCESS/SENSING TUBING (HYDRAULIC) TO BE 1/2" X 0.049" W.T. 316SS
 5. INSTRUMENT LINE TUBING TO BE 3/8" X 0.049" W.T. 316SS
 6. ALL TUBE FITTINGS TO BE SS (PROCESS/SENSING), SS (INSTRUMENT)
 7. ALL INSTRUMENTS TO BE VENTED INTO A COMMON HEADER
 8. ALL LOW PRESSURE REGULATORS ON BUILDING HEATERS TO BE VENTED OUTSIDE
 9. EQUIPMENT TO BE ASSET TAGGED AS PER ENCANA SARP ECA-LOSSP-S-05



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