

CUSTOMER SUPPLIED

TAG	QTY.	MAKE	DESCRIPTION
FE-1210	1	MUFLD	4" CL600 RF SENSOR METER RUN SCH 80 AGA 14.3.2, 3-4TH ED, 2000 SPEC TWO (2) 3/4" & ONE (1) 1" CL3000 TOL. XX F/F NACE TRIM, C/W FLOW COND., 100% XRAY & PMHT
MS-1210	1	CONTROL MICROSYSTEMS	CONTROL MICROSYSTEMS MULTIVARIABLE TRANSMITTER MODEL: 4182-DM2220U-L
FD-1204	1	SUR-FLO	SF1015 TURBINE METER 2" CL600 RF, NACE
BPCV-1213	1	SURFLO	SF10V CONTROL VALVE
P-125	1	MORGAN	METHANOL INJECTION PUMP AIR ACTIVATED HYDRAULIC DIAPHRAGM PUMP MODEL HD-562, 1000 PSIG MAX DISCHARGE PRESSURE, 25-150 PSIG SUPPLY PRESSURE, 0 PLUNGER, C/W 1/2" CHECK VALVE, 1/2" NPT MALE SUCTION, 1/2" NPT FEMALE DISCHARGE, 1/2" NPT MALE INSTRUMENT AIR SUPPLY
P-124	1	MORGAN	METHANOL INJECTION PUMP AIR ACTIVATED HYDRAULIC DIAPHRAGM PUMP MODEL HD-562-SK, 5000 PSIG MAX DISCHARGE PRESSURE, 25-150 PSIG SUPPLY PRESSURE, 0 PLUNGER, C/W 1/2" CHECK VALVE, 1/2" NPT MALE SUCTION, 1/2" NPT FEMALE DISCHARGE, 1/2" NPT FEMALE INSTRUMENT AIR SUPPLY
P-128	1	MORGAN	INHIBITOR INJECTION PUMP AIR ACTIVATED HYDRAULIC DIAPHRAGM PUMP MODEL HD-312, 1000 PSIG MAX DISCHARGE PRESSURE, 25-150 PSIG SUPPLY PRESSURE, 0 PLUNGER, C/W 1/2" CHECK VALVE, 1/2" NPT MALE SUCTION, 1/2" NPT FEMALE DISCHARGE, 1/2" NPT FEMALE INSTRUMENT AIR SUPPLY
CM-120	1	FLOW MAX	3" 802 SANDRAMER CHOKE MANIFOLD, 5000 PSI, (5) 3" VALVES/ 3" POSITIVE CHOKE (1) ADJUSTABLE CHOKE W/ TUNGSTEN CARBIDE SEAT AND ARM, 3" DOWNSTREAM CROSS/3" UPSTREAM CROSS.
1/4" CP4NIS	11	MORGAN	1/4" CHECK VALVE
PRV-1213	1	SUR-FLO	1/4" BACK PRESSURE REGULATOR-44-1788-24

BLIND & TAPPED FLANGES

MCS CODE	QTY.	DESCRIPTION
FLG-600RHB20T05	5	2"CL600 RF HUB FLANGE THREADED 1/2"NPT, CS SA-105-N
FLG-600RHB15T07	10	1 1/2"CL600 RF HUB FLANGE THREADED 3/4"NPT, CS SA-105-N
FLG-600RHB40T20	1	4"CL600 RF HUB FLANGE THREADED 2"NPT, CS SA-105-N
FLG-600RHB20T07	1	2"CL600 RF HUB FLANGE THREADED 3/4"NPT, CS SA-105-N
FLG-600RHB30T20	1	3"CL600 RF HUB FLANGE THREADED 2"NPT, CS SA-105-N
FLG-600RBL40	1	4"CL600 RF BLIND FLANGE, CS SA-105-N
FLG-600RBL30	4	3"CL600 RF BLIND FLANGE, CS SA-105-N
FLG-600RBL20	2	2"CL600 RF BLIND FLANGE, CS SA-105-N

SHIP LOOSE LIST

NO.	REVISIONS	DATE	BY	APPR.
11	REVISED AS SHOWN	09-12-22	PL	
10	REVISED AS SHOWN	09-12-14	AA	
9	REVISED AS SHOWN	09-12-10	AA	
8	REVISED AS SHOWN	09-11-30	AA	
7	REVISED AS SHOWN	09-11-26	AA	
6	REVISED AS PER CUSTOMER	09-11-12	AA	
5	RE-ISSUED FOR CONSTRUCTION	09-11-02	AA	
4	REVISED AS PER CUSTOMER	09-10-16	AA	
3	AS BUILT	10-01-12	JS	
2	REVISED AS PER CUSTOMER	10-01-12	AA	
1	AS BUILT	10-01-12	JS	

VALVE LIST

TAG	QTY.	MAKE	VALVE DESCRIPTION
*3"BA1D1S	3	FLOWMAX	3" CL600 RF SANDMAX BALL VALVE, NACE
3"BA1D1S	6	KF	3" CL600 RF FP BALL VALVE, NACE
1/2"BA1NIS	14	BALON	1/2" NPT RP, 3000PSI CMP, BALL VALVE, NACE
1"CA1NIS	1	NAVCO	1" NPT CL800 PISTON CHECK VALVE, NACE
3"GL1D1S	2	NEWCO	3" CL600 RF GLOBE VALVE, NACE
1/2"NE4P1S	4	CENTURY	1/2" 6000 PSIG CMP, SS NEEDLE VALVES
1/4"NE4P1S	9	CENTURY	1/4" 6000 PSIG CMP, SS CENTURY NEEDLE VALVES F4"
3"C1D1S	2	WHEATLEY	3" CL600 RF, SWING CHECK VALVE, NACE
3"Y1D1S	1	ALTA	3" CL600 RF Y-STRAINER, NACE
1 1/2"BA1D1S	10	WIKM	1 1/2" CL600 RF RP BALL VALVE, NACE
2"BA1D1S	3	KF	2" CL600 RF FP BALL VALVE, NACE
4"BA1D1S	1	KF	4" CL600 RF FP BALL VALVE, NACE
1/2"BA1FAN1S	2	MMS	1/2" NPT FP, 3000PSI CMP BALL VALVE, NACE
1"BA1NIS	12	BALON	1" NPT RP, 3000PSI CMP, BALL VALVE, NACE
2"BA1NIS	1	BALON	2" NPT RP, 2000PSI CMP, BALL VALVE, NACE
1/4"BA1NIS	9	BALON OR EQUAL	1/4" NPT RP, 3000PSI CMP, BALL VALVE, NACE
3/4"BA1NIS	1	BALON	3/4" NPT RP, 3000PSI CMP, BALL VALVE, NACE
BPCV-1212	1	NEWCO	3" CL600 RF GLOBE VALVE, NACE
3"GL1D1S	5	WHEATLEY OR EQUAL	3" CL600 RF, SWING CHECK VALVE, NACE
1"CAN1S	1	WHEATLEY OR EQUAL	1" NPT, 3600PSI CMP, SWING CHECK VALVE, NACE

BILL OF MATERIALS

TAG	QTY.	MAKE	DESCRIPTION
PSV-1200	1	FARRIS	PRESSURE RELIEF VALVE MODEL 28H13-120 2"CL600 RF IN x 3"CL150 RF OUT NACE PRIMARY TRIM, SET @ 990 PSIG 1" NPT x 1" NPT RELIEF VALVE, SET @ 150 PSIG, STD. SERV. TRIM
PSV-1220	1	FARRIS	PRESSURE INDICATOR 4" DIA., 0-1500 PSI NACE 1/2" NPT S.S. CASE & INTERNALS BOTTOM CONNECTION
P-1200/1211	2	WIKM OR EQUAL	PRESSURE INDICATOR 2 1/2" DIA., 0-200 PSI DUAL SCALE, 1/4" NPT, SS
P-1220	1	WIKM OR EQUAL	TEMPERATURE INDICATOR, 3" DIA., 50F-300F RANGE, DUAL SCALE, 1/2" NPT BACK CONN., 6" STEM C/W 1/2" x 3/4" x 6" 316 S.S. THERMOWELL
T-1200/1210	2	TREND OR EQUAL	1/4" NPT MODEL 67CR-601 REGULATOR, NACE SERVICE 0-125 PSIG, 250 PSIG MAMP, VENTED BONNET
PRV-1240/1250	3	FISHER	MODEL 627 PRESS. REG. 1" NPT END CONN., NACE TRIM 41/8" ORIFICE 70-150 PSIG SPRING RANGE 2000PSI MAX. INLET PRESSURE
PRV-1220	1	FISHER	1/4" NPT MODEL 67CR REGULATOR, NACE SERVICE 0-35 PSIG, 250 PSIG MAMP, VENTED BONNET
PRV-1200/1204	2	FISHER	3" CL600F SERIES E BODY CONTROL VALVE SIZE 667 W/ 45 ACT., 14-30 PSIG, FC, NACE
LCV-1204	1	CNS	MODEL 29720 TRANSPARENT LEVEL GAUGE C/W MODEL 14650 GAUGE VALVES, 3/4" NPT, NACE COMPLIANT
LG-1201/1202	5	JERGOSON	1001A LEVEL CONTROLLER, 2" NPT CONNECTION SNW ACTING, NACE
LC-1204	1	NORRISEAL	
LSH-1200	1	LIQUIPHANT	LEVEL SWITCH, MODEL: FL151-TGMZ84E5P LIQUIPHANT LIMIT SWITCH, 3/4" NPT CONNECTION, CSA DN, 1, ZONE 1, 2, 316L, 9" PROBE LENGTH, 100 BAR PROCESS PRESSURE
LS-1220	1	LOWERS & GAUGES	FUEL GAS SHUTOFF FSS0211 2" NPT CONN., 2" x 12" PVC FLOAT
F-122	1	PARKER	R0030-08 DESSICANT DRYER, 1" INLET AND OUTLET, 30 SCFM, C/W 5lb DESSICANT CAN, 300 PSIG MAMP, 180" MAX OPERATING TEMP.
P-1250	1	WIKM OR EQUAL	PRESSURE INDICATOR, 2 1/2" DIA., 0-1500 PSI, NACE, DUAL SCALE, 1/2" NPT, SS
P-1240	1	WIKM OR EQUAL	PRESSURE INDICATOR, 2 1/2" DIA., 0-6000 PSI, NACE, DUAL SCALE, 1/2" NPT, SS
P-1280	1	WIKM OR EQUAL	PRESSURE INDICATOR, 2 1/2" DIA., 0-1500 PSI, NACE, DUAL SCALE, 1/2" NPT, SS
PSV-1250	1	NUPRO	1/4" NPT x 1/4" NPT RELIEF VALVE, SST, MODEL SS-4R3M5-BU, SET @ 1000 PSIG
PSV-1240	1	NUPRO	1/2" NPT x 1/2" NPT RELIEF VALVE, SST, MODEL, SST-4R3M5-BU, SET @ 5000 PSIG
PSV-1260	1	NUPRO	1/4" NPT x 1/4" NPT RELIEF VALVE, SST, MODEL SS-4R3M5-BU, SET @ 1000 PSIG



APPROVED BY:	08/08/08	APACHE
DESIGNED BY:	PES	c/o TUNDRA ENGINEERING
CHECKED BY:	PES	CO. CODE # APPROVER ID #
TITLE:	BILL OF MATERIALS & NOTES FOR 60" ID x 18'-0" S/S SDR SEEP PACKAGE MAWP 1000 PSIG @ 500°F	
PROJECT NO:	10449	ISSUANCE NO:
REV. NO:	1 OF 2	REV. NO: